

University News

A WEEKLY JOURNAL OF HIGHER EDUCATION

MONDAY, AUGUST 26, 1996

Rs. 7.00

Mahatma Gandhi University — A Profile

C.R. MITRA

Higher Technical Education — Shifting Global Scenario

ANAND KUMAR

Open Medical University — Demand, Scope and Opportunities

MUSILIA KILIN

The Scourge of Consciousness — A Study of Michael Ignatieff's *Scar Tissue*

A.P.J. ABDEL KALAM

A Voyage of Vision — Convocation Address

INSA AWARDS

STUDENT TUTORING PROGRAMME

TOWARDS AN AGENDA FOR PEACE

DAAD FELLOWSHIPS FOR POSTGRADUATES



Association of Indian Universities

UNIVERSITY COLLEGE OF MEDICAL SCIENCES

(UNIVERSITY OF DELHI)

GURU TEGH BAHADUR HOSPITAL, DELHI-110095

ADVERTISEMENT NO. MC/ESTAB/2/11/96-1

Applications on the prescribed form are invited for the following Teaching Posts to reach latest by 09.09.1996.

PROFESSOR : Rs 4500-7300 Two posts for the Department of Physiology* and one post each for the Deptts. of Pathology* Paediatrics* (For Neonatology), Ophthalmology* and Obstetrics & Gynaecology*, Dermatology & STD, Orthopaedics

READER : Rs. 3700-5700 . One post each for the Deptts of Dermatology & STD* ENT*, Psychiatry*, Anaesthesia* and Orthopaedics Two posts each for the Deptts of Physiology* (One for Bio-Physics), Surgery*, Obst & Gynae*, Four posts for the Deptt of Medicine* (One for Cardiology and one for Neurology)

LECTURER : Rs 2200-4000 One post each for the Deptts of Physiology*, P S M* (for Bio-Statistics), Anaesthesia*, Psychiatry*, Dentistry* (Temp), Dermatology & STD, Obst & Gynae two posts each for the Deptts of Paediatrics*, Radiology & Anatomy.

NOTE :

- 1 15% posts of Lecturer are reserved for SC and 7.5% posts are reserved for ST
- 2 Professor/Reader Other things being equal preference will be given to SC/ST candidates
- 3 It will be open to the College to consider names of suitable candidates who may not have applied Relaxation of any of the qualifications may be made in exceptional cases on the recommendation of the Selection Committee.
- 4 The College reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant
- 5 3% posts of Lecturers are reserved for physically handicapped candidates.

*All those candidates who have applied for any of these posts in response to earlier advertisement of the College appearing in May/June 1995 for which selection has not so far been held need not apply again However, they may intimate the college if they still wish to be considered, in which case they may if required, update their Bio data

All posts carry usual allowances at the rates prescribed by the University from time to time Non-practising Allowance at Government rates is admissible to the persons with medical qualifications

The Application Form for various posts and details regarding prescribed qualifications can be had from the Reception Counter of the University College of Medical Sciences & G T B Hospital, Dilshad Garden Delhi- 110095 personally or on written request alongwith a self-addressed envelope of size 28 cm x 13 cm with postage stamps worth Rs 5/- which can be sent by Indian Postal Order drawn in favour of 'The Principal, University College of Medical Sciences Delhi-110 095

PRINCIPAL

GOVERNMENT OF INDIA FELLOWSHIP SCHEME

FOR POST GRADUATE WORK IN FORENSIC SCIENCE

Applications are invited from Indian Nationals for Fellowships for Post Graduate Research Work in all branches of Forensic Sciences Value of each Fellowship is Rs 2500/- per month for initial two years and Rs 2800/- per month for the third year plus a contingency grant of Rs 5 000/- per annum The Fellowships are tenable for three years Each selected fellow would be required to register and work for a Ph D degree The selected Fellows will be required to carry out research work in forensic science laboratories and allied institutions The Fellows could submit thesis for the Doctorate Degree

Qualifications:- 1st/2nd class Master's degree in any discipline of science including Physics/Chemistry/Bio-Chemistry/ Anthropology/ Microbiology/Biology/Mathematics, Forensic Science or M Phil in the same subject whichever is the basic qualification for the award of a Ph D degree of a recognised Indian University

Age : Preferably below 30 years on 30.6.1996

Reservation : Twenty percent of the total number of fellowships are reserved for Scheduled Caste and Scheduled Tribe candidates

Rules etc : Copies of rules of Fellowship Scheme and prescribed application forms can be had on request from the Chief Forensic Scientist/Director (Forensic Science), Bureau of Police Research and Development Ministry of Home Affairs, 3rd/4th floor, Block No 11, Kendriya Karyalaya Parisar, Lodhi Road, New Delhi-110 003 Self-addressed unstamped envelope (23x10 cm) may be sent with the request

Due Date : Application on the prescribed form should be addressed to the Director (Forensic Science), Bureau of Police Research and Development Ministry of Home Affairs, 3rd/4th Floor, Block No 11, Kendriya Karyalaya Parisar, Lodhi Road New Delhi-110003, superscribing on the cover "Application for Post Graduate Fellowship in Forensic Science" so as to reach him by 29.11.1996 If a candidate is already working in a University or a Government Institution, he/she should apply through the Head of the Institution in which he/she is working Every application shall be accompanied by the following documents -

- (a) Certified copy of Matriculation or School Leaving Certificate in evidence of age
- (b) Copies of all the degree, diplomas or certificate obtained alongwith mark-sheets duly attested by a Gazetted Officer of the Central or State Government or by the Head of the Institution
- (c) Copies of published work, if any, Originals should NOT be sent Safe return of any original document cannot be guaranteed The original shall, however, be sent, if specifically asked for by the Bureau of Police Research and Development
- (d) If candidate belongs to SC/ST he/she should send certificate in evidence of caste

Selection would be restricted only to those candidates who have passed National written test conducted by University Grants Commission, C S I R and Ministry of Human Resource Development

UNIVERSITY NEWS

VOL. XXXIV AUGUST 26

No. 35 1996

Price Rs. 7.00

A Weekly Journal of Higher Education published by the Association of Indian Universities

IN THIS ISSUE

Mahatma Gandhi University — A Profile	1
Higher Technical Education — Shifting Global Scenario	6
Open Medical University — Demand, Scope and Opportunities	8
The Scourge of Consciousness — A Study of Michael Ignatieff's <i>Scar Tissue</i>	15
Convocation Indian Institute of Technology, Bombay	17
Campus News Towards an Agenda for Peace	22
INSA Awards 1996	24
Student Tutoring Programme	24
Information Management in 21st Century	25
Agriculture Sustainable Crop Production in Fragile Environments	25
News from UGC Countrywide Classroom Programme	26
News from Abroad DAAD Fellowships for Postgraduates	26
Book Review	28
Education News Index	31
Classified Advertisements	35

Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :
SUTINDER SINGH

Mahatma Gandhi University

A Profile

Mahatma Gandhi University, Kottayam hosts the South Zone Vice-Chancellors Conference on 29-30 August, 1996.

Mahatma Gandhi University, one of the four universities in Kerala, established in 1983 has its headquarters in Kottayam, located in Central Travancore, with the lofty western ghats to the east, lovely Vembanad lake and the vast paddy fields of 'Kuttanad' to the west. This fertile, lush green panoramic land of hill resorts and beautiful backwaters is popularly known as the "Land of Letters, Latex and Lakes". The town of Kottayam was the first town in India which achieved total literacy and the place has played a prominent role in the publishing industry. The first printing press in the vernacular, Malayalam was established at Kottayam by Benjamin Bailey, a Christian Missionary in 1820 A.D. The oldest college in Kerala, C.M.S. College, started in Kottayam as early as 1835. The Land of Letters gained one more credit in its academic accomplishments with the inception of Mahatma Gandhi University on 2nd October 1983, the 115th birthday of Mahatma Gandhi, the Father of the Nation. The University was formally inaugurated on 26th October 1983, by Gyani Zail Singh, the President of India.

With 127 affiliated colleges, spread over an area of 1700 sq. km., it became too unwieldy for the Kerala University to function effectively. Further educationally backward districts like Idukki and Pathanamthitta needed special attention to improve their higher education infrastructure. It was in this context the Government of Kerala felt the urgent need for establishing a separate University with headquarters in Kottayam. Not only that Kottayam occupies the central position in the University area, it has also been playing a pioneering role for the spread of higher education in Kerala. Sixty eight colleges in Ernakulam, Idukki and Kottayam districts, Kuttanad taluk in Allapuzha district and Kozhencherry, Mallappally, Ranny and Thiruvalla taluks of Pathanamthitta district, which had been functioning under the University of Kerala, were brought under the jurisdiction of Mahatma Gandhi University.

The University has been making steady progress in all spheres of its activities, quantitatively and qualitatively. In certain areas of research and infrastructure development, it has set examples for other universities to follow. Now the University has grown as the largest University in Kerala with 89 affiliated colleges which include one Medical College, one Ayurveda College, two Homoeo Colleges, three Engineering Colleges, one Law College and 15 Teachers' Training Colleges. The University has also established under its direct supervision, 19 teaching and research departments, 26 regional centres, three study centres and four information centres.

Every year about 97,500 students are admitted to graduate and postgraduate level courses in the colleges affiliated to the University, of which about 2,500 are at the postgraduate level. In addition, various departments and regional centres of the University accommodate 800

students at the postgraduate and M.Phil. level and another 500 for doing research leading to Ph.D.

The growth has not been quantitative alone, the University has created a reputation of its own in the academic area. Some of the research programmes carried out in the University have already received national recognition. Several of the research scholars have won State or National awards on the basis of their research. The University departments devoted to other disciplines also have made significant contributions in their respective fields. During the last 8 years ever since the University started research about 120 research scholars have taken Ph.D. under the various faculties. The University conducts a large number of innovative courses under the semester pattern in the various departments (Annexure).

The Campus

The University campus is located about 12 km. away from Kottayam town. It is a serene place of scenic beauty spread over a hilly terrain. The administrative building is constructed in the traditional Kerala style and the department buildings are being constructed. This main campus houses two student hostels, health centre, computer centre, central library, administrative offices and examination wing and teaching and research departments.

All teaching departments offer M.A., M.Sc., M.Phil. and Ph.D. programmes in different disciplines. All these courses are unconventional and are innovative programmes. School of Bio-Sciences has courses covering the recent like Biotechnology, Biochemistry, Biophysics and Microbiology. School of Pure and Applied Physics specialises in Astrophysics and Applied Electronics. M.Sc. courses in School of Chemical Sciences are special and functional in the sense that the curriculum consists of one semester's training in research methodology and industrial practice in national laboratories or R&D wings of industries. School of Behavioural Sciences, besides offering M.Phil courses in innovative subjects like Rehabilitation Psychology, Behavioural Medicine, Rehabilitation Nursing, also runs an institution called Santwanam where trained teachers and clinical psychologist cater to the needs of mentally retarded children using Applied Behavioural Analysis approach. The School also envisages to provide vocational training and speech therapy. The School of Gandhian Thought and Development Studies has launched the Grama Swaraj Extension Programme

which tries to develop villages using local talents and local raw materials in a truly Gandhian way. Under the programme three villages have been identified and development activities are going on. School of Social Sciences conducts interdisciplinary programmes in the domain of Human Ecology in a political economy perspective. The school runs an M.Phil. programme in Human Ecology focussing on the Study of Ecological Movements, Alternative Politics, Knowledge Systems of Marginal Communities, Popular Conservation, Sustainable Development, Politics of Globalisation and Grassroots Politics.

School of Letters is another unconventional department, which has programmes of interdisciplinary nature with focus on culture studies. It also has a component on Theatre Arts and Creative Writing. The school brings out a standard journal *Haritham*. The School of International Relations is the first of its kind in the universities in Kerala to take up teaching and research and different area studies.

The Department of Printing and Publishing undertakes the publication of university level textbooks in languages for all the courses in the affiliated colleges. It also brings about scholarly publications related to research activities. Publication wing also brings out a monthly Newsletter highlighting the activities of the University.

Job Oriented Professional Courses

There are also a good number of Schools which offer a variety of job-oriented and professional courses. School of Medical Education, School of Indian Legal Thought, School of Environmental Studies, School of Management and Business Studies, School of Technology and Applied Sciences, School of Computer Sciences are among them. School of Communication and Information Sciences, besides the usual courses in journalism and library science has introduced a master's degree course in the science of printing and publishing. School of Applicable Mathematics has a Business Consultancy Services & a placement cell. The thrust area of the School is Operation Research, which is a major attraction for private companies to recruit personnel. School of Medical Education is a fairly big institution with B.Sc.(Nursing), B.P.T., B.Pharm, M.Sc., M.H.A. and M.Appl.Sc. courses. M.Sc. in Anatomy, M.Appl.Sc. in Sports Medicine, Medical documentation, Biomedical Instrumentation.

School of Distance Education also offers a few popular courses including certificate courses in English for Communication, Syriac language, House Management, etc.

Sports, Games & Athletics

Mahatma Gandhi University has an excellent record of achievements in sports and athletics. It has produced some of the top ranking athletes of national repute. The University has won the trophy for Athletics for three years consecutively. All India Trophy for Volley Ball was won by this University on six consecutive years. This department conducts a sequential postgraduate programme in Physical Education leading to the M.P.E. degree. It offers opportunities for coaches interested in upgrading their expertise.

Library and Information Services

The University Library, in this short span of a decade, has acquired all modern amenities. It is the first University library in Kerala to set up the on-line information retrieval facility. The library is presently linked to Science and Technology Network International which provides 250 databases on various disciplines. The University Library has two databases on CD-ROM (Compact Disk-Read Only Memory) the ICDL database and ERIC database, spanning a period from 1982 to 1995. The library has also introduced a document delivery service through which photocopies of articles from other libraries and National information centres are procured for researchers.

Cultural and Extension Programmes

The University has taken particular interest in fostering research, academic cultural and extension programmes. The University has instituted the Decennium Commemoration Lecture in Chemical Sciences, to be awarded annually to an outstanding scientist who has contributed significantly to teaching and research in the subject. Prof. C.N.R. Rao and Prof. M.S. Valiathan were the recipients of this award. Vaikom Muhammed Basheer Chair was instituted at the School of Letters to propagate literary activities and research in novel and short story in Malayalam. Prof. R.E. Asher was the first scholar to occupy the chair. The famous Oriya poet Jayant Mahapatra has accepted this honour this year. Linus Pauling Memorial Lecture, Aurobindo Memorial Lecture, Sankara Pillai Memorial Lecture and the

Vivekananda Chair are other academic extension programmes conducted regularly.

National Service Scheme

The activities of the National Service Scheme (N.S.S.) of this University has won laurels for their services. In 1994 N.S.S. of this University was awarded the Indira Gandhi National top most N.S.S. Award for its most outstanding service at the national level. In 1989 the N.S.S. in collaboration with the Kottayam municipality launched a crash programme to achieve 100% literacy in Kottayam. The Kottayam town was declared 100% literate on the successful completion of this programme. The N.S.S. of the University comprises 180 units of 18,000 volunteers from 74 colleges. Now the N.S.S. has been arranging 20 camps in the University campus working on various themes and constructive activities.

Department of Student Services

The Department of Students Services started functioning in 1986 with the objective of organising and coordinating student welfare programmes. It has been conducting a number of programmes such as quiz, debate, essay competition, elocution competition and youth festival for the all-round development of students in the affiliated colleges. As a result of the systematic activities of this department, the students of this University have bagged a number of prizes and awards at the zonal and national level. The Mahatma Gandhi University won overall championship in the South Zone Youth Festival in 1991-92, 1992-93, 1994-95 and 1995-96. In order to develop the competitive talents of the students the University has established career guidance centres in all the colleges affiliated to the University. The University also encourages the students by giving cash awards and scholarships on the basis of their achievements in national level competitions.

Research Projects

The University has undertaken research projects in all the subjects under the various faculties. There are approved research centres in several of the post-graduate departments of affiliated colleges also. A number of national laboratories, institutions of higher learning in arts, humanities and social sciences are also recognised research centres of the University. A large number of research schemes sponsored by UGC, DST, CSIR, ICSSR and the State Committee

on Science, Technology and Environment (STEC) have been successfully completed and/or being pursued. The University departments collaborate with the inter-university centres and the INFLIBNET for

availing research and other information facilities.

The University intends to come under the purview of the National Assessment and Accreditation Council (NAAC) for evaluation of its programmes.

Annexure

COURSES IN THE UNIVERSITY DEPARTMENTS

1. School of Biosciences

- M.Sc. : Biochemistry, Biophysics, Biotechnology, Microbiology
 M.Phil. : Biochemistry, Biophysics, Microbiology
 Ph.D. : Biochemistry, Biophysics, Biotechnology, Microbiology

2. School of Chemical Sciences

- M.Sc. : Four semester course in Chemistry with specialisations in Polymer Chemistry, Organic Chemistry, Inorganic Chemistry and Physical Chemistry. The unique features of these courses is that the curriculum consists of one semester's training on research methodology/industrial practice in national laboratories or R&D Wings of industries.
 M.Phil. : M.Phil. in Chemistry with possible specialisation in Polymer Chemistry, Organic Chemistry, Inorganic Chemistry, Physical Chemistry or Theoretical Chemistry.
 Ph.D. : All branches of Chemistry including Polymer Science and Rubber Technology. The programme consists of Pre-Ph.D. course works also.

3. School of Gandhian Thought and Development Studies

- M.A. : Gandhian Studies
 M.Phil. : Gandhian Studies
 Ph.D. : Gandhian Studies (Full time & Part time)

4. School of International Relations

- M.A. : Politics & International Studies
 M.Phil. : International Relations

- Ph.D. : International Relations

5. School of Behavioural Sciences

- M.Phil. : Special Education and Rehabilitation Science, Rehabilitation Psychology, Behavioural Medicine & Rehabilitation, Behavioural Science & Rehabilitation Nursing.
 Ph.D. : Behavioural Science

6. School of Pure and Applied Physics

- M.Sc. : Physics (Specialisation in Astrophysics and Applied Electronics)
 M.Phil. : Physics
 Ph.D. : Physics

7. School of Letters

- M.Phil. : English, Malayalam, Theater Arts
 Ph.D. : English, Malayalam, Comparative Literature, Theater Arts & Cultural Studies

8. School of Pedagogical Sciences

- B.Ed. : In all areas of education and educational technology
 M.Ed. : "
 M.Phil. : "
 Ph.D. : "

9. School of Distance Education

- LL.M. Degree: (Three years) Kottayam Centre, Hyderabad Centre
 B.A. : Sociology, History
 M.A. : Sociology
 Certificate Courses : English for Communication, Syriac Language, Home Management, Gandhian Thought

10. School of Social Sciences

- M.A. : Inter-disciplinary Social Sciences (Economics, History, Philosophy and Anthropology)

- M.Phil. : Social Science**
a. Inter-disciplinary (Economics, Sociology, History, Philosophy and Anthropology)
b. Human Ecology and Natural History
- Ph.D. : Human Ecology and Natural Sciences**

11. School of Computer Sciences

- M.Sc. : Computer Science**
Ph.D. : Computer Graphics, Computer Aided Design, Computer Aided Manufacturing, Database Management

12. School of Technology and Applied Sciences

- B.Sc. : Computer Science, Electronics**
B.Sc.Tech. : Polymer Technology
M.C.A. : Master in Computer Application

13. School of Communication and Information Sciences

- | | | |
|------------------|----------|---|
| BLi.Sc. | : | Bachelor of Library and Information Sciences |
| M.C.J. | : | Masters of Journalism and Communication |
| M.App.Sc. | : | Master of Applied Science in Printing & Publishing |

14. School of Environmental Studies

- M.Sc. : Environment Management**

15. School of Indian Legal Thought

- LL.B. (Hons.): Day (5 Years)**
LL.B. : Evening (3 Years)
LL.M. : Regular Branch I : Intellectual Property Law
Branch II : Human Rights
Ph.D. : Part time and full time

16. School of Sports and Physical Education

- M.P.Ed. : Master of Physical Education**

17. School of Applicable Mathematics

- M.Sc. : Mathematics**
M.M.Sc. : Management Science
PGD-MMC: Post Graduate Diploma in

- Mathematics, Management
and Computer Applications**
- M.Phil. : Applicable Mathematics
Mathematics Operations
Research**
- Ph.D. : Applicable Mathematics
Mathematics**

18. School of Medical Education

- B.Sc. : Nursing, Physiotherapy, Medical Laboratory Technology, Medical Radiological Technology, Medical Microbiology**

- B.Pharm.**
M.Sc. : **Nursing, Anatomy**
M.H.A. : **Master in Hospital Adminis-**
tration

- M.App. Sc :** Sports Medicine, Medical Documentation, Medical Biochemistry, Biomedical Instrumentation

19. School of Management and Business Studies
M.B.A.

20. School of Applied Life Science

- M.Sc. : Fisheries, Biology and Aqua Culture**

Concept TRADE IN GREATER BOMBAY

**COMMERCIAL GEOGRAPHY OF
A METROPOLITAN CITY**
Spatial Structure of Retailing in Bombay
TAPATI MUKHOPADHYAY

Hardbound **Rs. 350**

The study examines the nature of temporal and spatial growth of retailing trade in Greater Bombay in mutual relation to the demographic and functional growth of the city in general and in relation to commercial activity in particular. It examines and evaluates the nature and intensity of spatial organisation of the retail trading activity of Greater Bombay to analyse the spatial differentiation and specialisation of retailing function

Tapati Mukhopadhyay is Reader in Geography in Siddharth College of Arts, Science and Commerce, Bombay.

Published by : Ph.: 5504042, 5554042

CONCEPT PUBLISHING COMPANY

**A/15-16, Commercial Block, Mohan Garden,
NEW DELHI - 110059 (INDIA)**

Cable : CONPUBCO Fax : (011) 5598898

Higher Technical Education

Shifting Global Scenario

C. R. Mitra*

Preamble

This paper has been specially prepared to draw attention not only to the shifting emphasis in the world but also to touch upon some outstanding success stories. It is not supposed to be a comprehensive paper. It is written with the view to give pointers and bring out in the open factors which have been largely ignored by the higher technical education system in India.

Providers

- * Provision of higher technical education is simultaneously being made by public (government), by private initiative and by business corporation.
- * In the area of business participation the maximum role played has been in USA and Japan. The trend is on the increase. Netherlands and Australia are somewhere in the middle. Britain, France and Germany appear to move out of the exclusive public provision into a situation of important business role in the system.
- * It is to be clearly understood that the above context is not manifest only in business providing money for a system designed in the image of some one else. Business participation is much more purposive and comprehensive. This was helped in USA through the non-governmental accreditation system.

Role of Industry

- * Industry is increasingly getting involved in education as an active participant or an independent patron or provider. Business has initiated some new institutions which are profit-making or proprietary. Japan has moved more aggressively than USA in this activity.
- * Business has traditionally played an important role in the cooperative educational schemes of institutions both in USA and its other versions in Europe

- * Business is cooperating with universities in certain programmes of studies which are collaborative in the sense that the teachers and the students are drawn from both the worlds.
- * Industry is becoming an increasing source of new money for research and R&D development. Sponsored research is a veritable source of additional money to help university make intelligent management of money and resources.
- * Industry has a healthy need to secure consultancy from university faculties.
- * Business, through commission or through corporate support, has caused the formulation of many important policy studies on education. These studies act as landmark documents.
- * Business is demanding a new role towards solving the problems of higher education in the context of explosion of knowledge.
- * The governmental education system too, faced with cash crunches, has been obliged to induct business attitudes in management.

Attitude Towards Knowledge

It is only through the alliance of university and enlightened government and business corporations that attempt is made to make university an intellectual think-tank and an asset to the nation. The intellectual impact of the university is to be measured through its publication, its output of textbooks, through the design of new institutions, and a forceful entry into the global scene. It is only thus that a sustained export of educational services is achieved by these countries.

Governance

Age-old institutions and agencies created by the government are now disappearing. The management of a university is free from the rigid administration of a traditional university and has emerged into an exercise where the university has gained its own agency.

Variety of Institutions

The tendency is to standardise the duration and

*Former President, Association of Indian Universities, and Director, Birla Institute of Technology and Science, Pilani (Rajasthan).

input qualifications of the various degrees in any discipline of knowledge. But the mode of delivery and the nature of curriculum springs from a desire to serve target groups and meet their educational needs. This is increasingly tending towards what might be called as horizontal differentiation. Under this manifestation the distinction between degrees and diplomas has lost its meaning. It is the curriculum only which determines the purpose for which a particular graduate has been prepared. There is a need for preparing an engineer with a science emphasis as much as there is a need for preparing an engineer with skill orientation.

The variation between these institutions is not merely on the basis of their administrative structure. They differ because they address differing target groups, deliver discrete package of courses and create a variety of symbiotic relationship between the institutions and the industry.

New Degrees

- * There is no attempt to create new degrees with new nomenclature to take care of new educational needs. Degree nomenclature remains unaltered but the contents change.
- * New knowledge is very rarely placed at the graduate level. Usually the new knowledge will replace the old version of the knowledge at the appropriate place. The curriculum is constantly updated both by creative discard and intelligent inroads.
- * The business of higher education is considered to be so important that there are scores of American universities which accept higher education as an area of study for which university degrees are awarded.

A New Phenomenon

The both way movement of men and ideas between university and industry has already laid ground for the emergence of several hitech industries. Members of the university faculty, singly or collectively, participated as entrepreneurs in this emergence. Thus, have been the phenomena of Route 128 and Silicon Valley, Technology Park, etc.

A Paradigm Shift

Public funds are no longer available to higher technical education at levels granted before. Alert

universities have adopted policy alternatives to become more market sensitive and to achieve greater educational productivity. As in other matters higher Technical Education has gone global. Universities in the developed world are aggressively marketing their degree in the developing world. Unfortunately the universities in the developing world have remained passive.

Conclusion

The conclusions which are pertinent for this paper are listed below from the point of view of a prospective Indian initiative which might happen.

- (i) Ideas and techniques borrowed from outside must be analysed against the historic and cultural setting in which these were born abroad.
- (ii) Self-reliant and adaptive system must be always designed to achieve stability and creativity.
- (iii) The problem of teaching engineering design has no easy answer. India has to do different experiments to meet this challenge.
- (iv) It is mandatory that India takes time out to reflect as to why so many ideas borrowed from abroad have failed to click in India. Otherwise, the next bout of reform will go through a painful cycle of disappointment and waste of resources.
- (v) There are notable examples of success stories even in India which need to be identified and discussed.
- (vi) The survey will not be complete if further discussion keeps away from the identification of what is called the Invisible System, which is inhouse training in large industries as well as the training industry in various professional fields. It is pertinent to remember that this Invisible System is not recognised and therefore it is never part of an educational debate. However, it serves the cause without any money from the government.
- (vii) A new policy enunciation in education for the nation would have to reckon with these changes in the global scene.
- (viii) The educational system in India must take activist approach to the new presence of foreign universities who are invariably seeking alliances with the training industry and not their familiar partners in the formal system.

OPEN MEDICAL UNIVERSITY

Demand, Scope and Opportunities

Anand Kumar*

With the advancement in the technologies of communication and education, the universities are meeting the pressure on the educational system through distance education or open learning. All the seekers of higher education have now an opportunity to update themselves in humanities, sociology, commerce, science, technology, business management, law, education, computer sciences, health sciences including nursing and other professional and vocational courses, without physically cramming the university halls. About half a dozen open universities (OUs) in India are looking after the aspirations of those who desire to pursue higher education.

Postgraduate medical education has the distinction of being one of the oldest disciplines based on the principle of non-formal self-education, a prototype of distance learning. Self-learners are examined and certified as consultants and specialists by British Royal Colleges. The Royal Colleges of Surgeons and Physicians have been awarding fellowships (FRCS) and memberships (MRCP) respectively by examination since 1935 (*Aziz and Cullen, 1994*). Indians have been obtaining these qualifications since before Independence. A similar facility is offered in India from the year 1982 by the National Board of Examinations (NBE, 1993-94). But it is appalling to learn that not one open university exists to address the needs of medical graduates. There are about 160 medical colleges which produce 16,000 medical graduates each year. It is not possible for a traditional medical college to assure higher education to all. Moreover, all the students are not in a position to avail further education in continuum. But further training is a must in terms of national needs and individual aspirations.

Some associations and professional bodies oppose expansion of the number of specialists on the ground that high standards can neither be monitored nor maintained if the number of practitioners

is large. A large number of individuals seeking higher education following initial education are in no way a threat to the excellence of scholarship (*Perry, 1976*). The dogma "more means worse" could arguably be justified at the level of the mass production of basic doctors. Regulation of the number of practitioners of medicine should be exercised at the level of admission to the MBBS course itself. Thereafter each should be allowed and encouraged to develop his/her potential to the full, so that the community gets the best deal from them. A better educated and skilled doctor will be more of an asset to the community than a practitioner with no further growth after he finishes his "totipotent" initial training. Hence provision of degree and diploma courses for medical graduates through distance learning will only improve the quality of health care rather than ruin it.

The aims of an Open Medical University (OMU) in providing medical education could be to :

1. provide opportunities for those who missed postgraduate specialist training of their choice earlier;
2. provide continuing medical education (CME) to general practitioners and the specialists in this era of information explosion;
3. provide education in the areas not covered by the traditional medical colleges but are the identified need of the society and profession such as Public Health and the training of the medical teacher; and
4. generate financial resources for sustenance of university activities.

Postgraduate Medical Education

After the completion of compulsory internship, medical graduates compete for admission to postgraduate courses (degrees and diplomas) in the medical colleges recognised by the Medical Council of India (MCI). Due to the limited number of seats the unsuccessful ones are eventually forced into jobs

*Department of Physiology, All India Institute of Medical Sciences, New Delhi - 110 029.

or private practice. Often they even may possess better attitudes, psychomotor skills and cognition but are left out because the competitions are designed to test the power of recall alone. Secondly, all the medical graduates are not in a position to resume postgraduation immediately after graduation due to financial constraints. Currently, those who could not pursue their postgraduate studies in medical colleges are provided an opportunity to continue their postgraduate studies on the basis of self learning by the National Board of Examinations (NBE).

The NBE is an autonomous body of the Ministry of Health and provides postgraduate diplomas equivalent to MD/MS of the medical colleges. The diplomas have a statutory recognition by the MCI. It is noteworthy that any medical undergraduate or postgraduate course that is not recognised by the MCI is illegal. For the NBE diploma the candidate has to work in a hospital recognized by the NBE, for a period of 3 years in the given speciality, and then appear for the examinations.

Postgraduate Medical Diplomas

The NBE diplomas are rather advanced and academic with scientific details which are unnecessary and irrelevant for a practitioner. These diplomas qualify one for academic and faculty positions. The 1993-94 Annual Report of the NBE shows that only 19.7% of the examinees in medical and surgical disciplines could pass the examination during 1988-1993.

One year diploma on the pattern of DGO (obstetrics and gynaecology), DOrth (orthopaedics), DCH (paediatrics), DLO (ENT) etc etc are more relevant and practical for the practitioners. Hence the postgraduate specialist diploma courses recommended by MCI need be taken up either by a MOU or the NBE in addition to the traditional medical institutions. In fact, private colleges charge a huge fee (in lakhs of rupees) clandestinely for admissions to one year diploma programme recognized by the MCI.

Selection of Viable Courses by a OMU

The draft of the National Education Policy on Health Sciences (NEPHS) has clearly identified the national need for specialist manpower and is the guiding principle for any medical institution,

whether conventional or open (Bajaj, 1990). The specialities identified in the NEPHS are in the following order:

1. General Medicine
2. General Surgery
3. Paediatrics (Child Health)
4. Obstetrics and Gynaecology (Womens' and Maternal Health)
5. Public Health/Community Medicine

The draft states "All effort will have to be made in the coming years to produce these specialists in adequate numbers and wholesome quality The National Education Policy in Health Sciences will have to focus on the development of these specialists both from the professional point of view as also with regards to societal needs."

For the success of any programme the consumers or the takers of the programme are an essential component. Several programmes fail because of the lack of market survey and the knowledge of the felt needs of the students and society. It is ironical that medical graduates or practitioners do not choose their specializations on the basis of societal needs but on considerations of the monetary advantage, authority and glamour associated with a speciality. However it is heartening to note that the first four specialities are the top career choices of the medical graduates as well (Tables 1 and 2). The fifth speciality mentioned in the NEPHS unfortunately seems to have a few takers like basic medical sciences.

Applications for a career in basic medical sciences (with the exception of pathology) and community medicine are so few that one can get admission without a real competition in a medical college. Such courses, if offered by an OU are likely to meet frustration due to poor enrolment. Moreover there are always seats in the regular medical colleges for those desirous of a career in community medicine. Additionally, they would also be paid handsomely in return for their concomitant services to the undergraduate medical education, laboratory services and the community. For these reasons NBE has discontinued its courses in basic medical sciences (with the exception of pathology). The Community and Public Health courses of the NBE are in the same boat as the basic science courses. Under the present circumstances in order to strike a balance between

Table 1. Number of Candidates who sought various specialities offered by NBE in the years 1988-1993. Numbers below 50 are not included in Basic Medical Sciences.

<i>Specialities</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
<i>Basic Medical Sciences</i>						
Pathology					60	52
Anatomy, Physiology, Pharmacology, Microbiology, Bacteriology, Biochemistry and Forensic medicine had a few takers to no takers only.						
<i>Clinical Specialities</i>						
<i>Medical Specialities</i>						
Medicine	151	156	188	251	293	400
Paediatrics	93	106	129	234	275	296
Radiodiagnosis				70	126	148
Anaesthesiology					153	167
<i>Surgical Specialities</i>						
Surgery	158	223	188	302	370	445
Obstetrics & Gynaecol.	197	132	142	229	312	386
Orthopaedics	68	78	121	179	213	269
Ophthalmology		51	68	121	181	226
ENT	73		52	71	93	126
<i>Community Health Specialities</i>						
Social & Preventive Medicine	4	5	6	9	5	16
Maternal & Child Health	2	5	10	5	3	2
Health Administration	10	12	8	5	3	6
Occupational Health	3	3	0	0	0	0
Family Medicine	-	-	5	8	14	35

Source: NBE Annual Report, 1993-94.

Table 2. Speciality choice ranking by 692 final year medical students from 11 medical colleges representing all regions of India.

<i>Speciality</i>	<i>Ranking</i>	<i>Speciality</i>	<i>Ranking</i>
Medicine	1	Anaesthesiology	11
Surgery	2	Radiology	12
Paediatrics	3	Microbiology	13
Ophthalmology	4	Pharmacology	14
Obstetrics and Gynaecology	5	Social and Preventive Medicine	15
Orthopaedics	6	Physiology	16
ENT	7	Forensic Medicine	17
Pathology	8	Biochemistry	18
Dermatology	9	Anatomy	19
Psychiatry	10		

Note: The table is modified and presented after Ramalingaswamy (1987)

duty to society and cost effectiveness of a programme, clinical courses should primarily be offered by an OU with a heavy inbuilt bias towards community health practice within the clinical speciality instead of offering courses in community medicine alone. If an OU offers only those courses which arouse poor or no motivation in the takers of the course it will serve neither the purpose of the society nor of the university. It is, therefore, suggested that the clinical courses should subtly serve as a vehicle for community health practice instead of bland undiluted community health programmes alone. This way the physician would be compelled to willingly fulfil his social obligations. This would improve the motivation of the medical graduate to actively learn the community health programmes and identify his/her role in health care management and delivery. The clinical orientation will ensure care of the community by the clinical specialist produced by the OU and meet the objective of the NEPHS. The OU can have independent modular certificate programme for community health practices which should also be made a compulsory component to be cleared for the award of diploma in a clinical subject. Even in the UK the doctors working in community health are not experts in community medicine but are clinical specialists (*Richards, 1995*). Only a small number of consultant posts are available in community specialities and training programmes for these posts are yet to be developed in UK. (*Richards, 1995*). The British example proves that highest standards of community and public health can be achieved even without the involvement of large number of community health experts.

Development of distance learning programmes leading to diplomas in Internal Medicine (DIM), Diploma in Paediatrics/ Child Health (DCH), Diploma in Gynaecology and Obstetrics (DGO) with an inbuilt essential component of community and public health practice is therefore suggested on the basis of the recommendations of NEPHS.

This paper does not argue against the community and public health courses but suggests the ways of strengthening them by improving the motivation and acceptance. The paper does not suggest the abolition of the already running community health courses either. These programmes would still have takers among the nurses, health administrators and also some of the medical practitioners for the pur-

pose of self enrichment and the requirement of their specific jobs. The community health courses should be adapted for the multiprofessional health team (*Bajaj, 1993*).

Non-Accredited CME Courses by a OMU

Doctors outside the setup of a teaching hospital need to update their skills and knowledge periodically. When the gap between the newer concepts and practice of health care delivery becomes great it leads to a suboptimal performance of the health care delivery. National resources are squandered when the doctor performs suboptimally and no country — rich or poor — can afford that. It is impossible to expect a doctor in the peripheral areas to keep abreast of the explosion of information in medicine without regular updating. Medical knowledge is doubling every 5 to 8 years and predicted to double itself every year shortly (*McGuire, 1994*). It would be futile and educationally unsound to modify the core curriculum of traditional education with virtually daily additions. Important knowhow and advances should be identified out of the noisy information and packaged and delivered to the generalists and specialists both. More important would be to identify the practices proven wrong in the light of the new knowledge and save the patient as well as the physician. It is not uncommon to find doctors abetting illness in good faith because of obsolete knowledge. CME has been made a legal obligation on the practising physician in many of the Western countries (*Walton, 1994*).

A report from the US suggests that one out of ten physicians are unfit to practice (*Sherman and Lambiase, 1993*). There is no reason to believe that we in India would be better or worse. Now with the introduction of Consumer Protection Act, 1986 and inclusion of medical services within its purview there is greater pressure on the physician. The media is also adopting a very investigative attitude towards both the reputed hospitals and the individual doctors. A CME package at this juncture would provide a great relief.

Some private individuals, businessmen and organisations sporadically organise CME workshops in 5 star hotels and charge upwards of Rupees 3000-10,000 from the participants, but these are not regular affairs and only a few can afford these. Some of the academic institutions, the pharmaceutical in-

dustry and professional bodies also organise CME workshops regularly for in-service and practising doctors, indicating a felt need of such programmes by the latter. Christian Medical College, Vellore has recently started a CME programme through distance education in clinical subjects for practitioners (Sharma *et al*, 1994). Thus not only a need but a strong demand by the practitioners for such CME programmes exists for all to see.

The National Academy of Medical Sciences (NAMS) has been made a nodal agency for the CME programmes in the country. The noncommercial CME is financially supported by the NAMS. The CME programmes need regularization, preparation of learning resource materials and certification by NAMS or an university, and its recognition by MCI to enhance the prestige of the programme, and consequently to ensure a larger participation. An OMU may collaborate with the NAMS in CME activities. It is customary in the medical profession to use degrees and certificates as suffixes to the names. The patients do want to know about the training and qualifications of the persons to whom they would entrust their lives. These suffixes are the most suitable way to inform the patients of what they would hesitate to ask otherwise. Hence educational packages without the MCI-recognized certification would have poor appeal for medical practitioners.

Participation of an OMU in CME programmes is not only welcome but required as well. These programmes could be very profitable for an OMU. The draft document of NEPHS in fact suggests a role for the Indira Gandhi National Open University (IGNOU) in the CME. Even the MCI in its report and recommendations (1994) suggests "In the interest of medical education, excellent non-teaching institutions could be integrated into educational programmes for not only students but teachers as well, particularly in their "Continuing Education Programmes".

Course on Medical Pedagogy

Medical education is undergoing a sea change with the advances in the technology of education. Innovative methods are being incorporated in the teaching and learning of medicine. Curricula are being developed and modified to suit the need of the learner and the society. The medical colleges are

increasingly becoming aware of pressures to train staff in the effective training of the undergraduates and postgraduates. The need for training of a medical teacher has become acute to get the attention of the NEPHS and MCI. Medical education is not synonymous with science education or technology education.

The following quotation succinctly brings out the unique characteristics of medical education :

"Medical education is unique in comparison with any other area of knowledge. It is one profession where teaching and practice has never been separated. A professor of surgery is necessarily a surgeon and a professor of medicine is also a physician.... If you take education in engineering the practicing engineers play a negligible role; it is by and large moulded by the academia." (Kulandaiswami, 1992).

The medical teacher is supposed to perform three tasks, viz. patient care, research and teaching. The first 2 functions are well structured and dominant in any teaching institution but the last one is confined to didactic lectures or bed-side teaching. What to teach and how to teach is a matter of personal interest in the subject and intuition rather than the relevance or the need of the learner. Medical education is distinguished because of its complexity and amalgamation of several pedagogical streams. It encompasses biological science, art, psychology, interpersonal and social interaction and communication. The teaching of medical science pedagogically has a preclinical component of science and biology teaching and a clinical component of didactic and bedside teaching. Both the components are educationally different entities and have to be viewed as such.

In almost all medical institutions of India and even in the West, teachers do not know how to set educational objectives, design curricula and develop suitable assessment strategies. No structured activities are designed to promote student participation and promote learning. The resource material for teaching and learning is confined to a favourite textbook of the teacher. Teachers are handicapped in producing their own instructional materials using multiple media to promote student learning.

To improve the health care system in the country with immediate effect, the delivery of medical education must be overhauled. Faculty development has been recognised as top priority by the NEPHS. The NEPHS and MCI (1994) in fact suggest participation of IGNOU in manpower development. The MCI in its report and recommendations (1994) has said that, "In the interest of medical education and the quality of teaching, an induction training in medical pedagogy should be given to all entrants to teaching faculty. Certificate or diploma and degrees in medical pedagogy should become an essential requisite for appointment of medical teachers at all senior levels." Fullfledged Diploma and Master of Medical Education certificates through distance learning courses are available from pioneering institutions abroad such as the Centre for Medical Education, University of Dundee, Scotland, UK and Universities in Australia and USA.

Revenue by Postgraduate Courses

The NBE recognises about 150 non-teaching hospitals on the basis of infrastructure and facilities for postgraduate training in addition to MCI recognised teaching institutions. It charges Rs 15,000 per subject from a recognised non-teaching hospital as fees, initially for three years and then for the renewal of the recognition. A student has to pay Rs. 7,600 for admission, examinations and certification. In case the student fails in the practical examination he has to pay again for reappearing. The postgraduate medical diploma courses recognized by MCI would probably be the most profitable venture of an MOU. Even district hospitals, government hospitals and good private and public sector hospitals in cities and rural areas could be used as training centres for diploma programmes. The infrastructure for one year diploma programme would certainly be much lower and cheaper than NBE's current 3 year postgraduate diploma programme. And certainly a larger number of doctors would be benefited.

Why an OMU and Not a General OU? — The Logistics

The faculties of engineering, agriculture and medicine have traditionally been placed outside the mainstream of a university because of the special nature of learning requirements.

Medical education has become more complex because of the involvement of several external agencies and the state governments for the final registration of a practitioner. Participation of accredited hospitals, MCI, Ministry of Health, NBE and the NAMS in the administration of medical courses would be essential in any OU for the recognition of all medical diplomas by the MCI. The MCI does not allow total autonomy in curriculum. It ensures uniformity in curriculum and standards all over the country. The general open universities would face several odds in view of these statutory provisions. Hence organization of a medical school within an OU would require the statutory changes at all the levels mentioned before, and would practically cut the school out of the university's direct and complete control. In this situation the medical school would neither be fowl nor flesh in a general OU. Moreover the aim and the target of an OU are more general in nature and rightly so. Hence it would be advisable to have a separate MOU to address the needs of medical practitioners without friction and attrition at various levels.

To date, very few centres are offering distance learning programmes for medical practitioners. These programmes lack popularity and acceptance because of their insensitivity to the preferences of practising doctors and non-recognition by the MCI. Currently these programmes are not rewarded either by a title or suffix to the name of the practitioner. Mistakenly most of the distance education centres including IGNOU offer community and public health programmes. These programmes are rejected by the medical students as we have already discussed. It would not be an expensive proposition to start a new MOU. The NAMS and NBE which share the same building in New Delhi can share the budget too to form the nucleus of the new MOU. The professional programmes such as that of management in traditional OUs earn enough to sustain themselves. These professional programmes not only sustain themselves but also help in meeting societal obligations of the university which are more often than not money losing ventures. The profitability of medical diploma programmes as evidenced by the success of NBE diploma programme today, will make the MOU self financing and independent of governmental support.

References

- Aziz, Laura R. and Cullen, M.S. (1994) United Kingdom. In *International Handbook of Medical Education* (Editors, A.W. Sajid, Christine H. McGuire, Rebecca M. Veach, Laura R. Aziz, Linda K. Gunzburger) Greenwood Press, Westport, USA, Pp. 393-404.
- Bajaj, J.S. (1990) Draft national education policy for health sciences. *Indian Journal of Medical Education* 29, 36-55.
- (1993) Multiprofessional education as an essential component of effective health services. *Indian Journal of Medical Education*, 32, 12-23.
- Kulandaiswami, V.C. (1992) Newer educational technologies in health sciences. *Indian Journal of Medical Education*, 31, 21-28.
- McGuire, Christine H. (1994) An overview of medical education in the late twentieth century. In *International Handbook of Medical Education* (Editors, A.W. Sajid, Christine H. McGuire, Rebecca M. Veach, Laura R. Aziz, Linda K. Gunzburger) Greenwood Press, Westport, USA, Pp. 1-12.
- National Board of Examinations (Ministry of Health and Family Welfare) *Annual Report, 1993-94*, Government of India, New Delhi.
- Perry, W. (1976) Continuing Education, In *Open University*, The Open University Press, Milton Keynes, UK, Pp. 281-286.
- Ramalingaswamy, P. (1987) Speciality choice of medical students. *Medical Education*, 21, 53-58.
- Report and Recommendations of National Conference on Training Teachers Today for Tomorrow's Needs* (1994) Medical Council of India, New Delhi pp. 5-6.
- Richards, P. (1995) *Career Opportunities in Learning Medicine*, B.M.J. Publishing Group, Pp. 87-100.
- Sharma, S. Kacker, S.K. and Adkoli, B.V. (1994) India, In *International Handbook of Medical Education* (Editors, A.W. Sajid, C.H. McGuire, R.M. Veach, L.R. Aziz and L.K. Gunzburger), Greenwood Press, Westport, USA, Pp. 209-229.
- Sherman, C.D. and Lambiase, P. (1993) Continuing medical education in the United States: a critique, *Eur. J. Cancer*, 29A, 784-787.
- Walton, H.J. (1994) Continuing medical education in Europe: a survey, *Medical Education*, 28, 333-342.

INDIAN COUNCIL OF MEDICAL RESEARCH

APPLICATIONS ARE INVITED UPTO 30TH SEPTEMBER, 1996 FOR THE FOLLOWING POSTS AT THE COUNCIL'S INSTITUTES :-

(A) AT THE NATIONAL INSTITUTE OF NUTRITION, Hyderabad :- The National Institute is engaged in top level basic, applied and operation research in different Nutritional Sciences. The Institute has been responsible for initiating major research programmes in human nutrition and has also been serving as an important training centre in Nutritional Sciences in the South East Asian region for medical and paramedical persons.

DIRECTOR : (Scale of pay of Rs. 5900-200-6700) - One Post. **Qualifications & Experience** : Essential: M.D./Ph.D/ D.Sc in medical sciences or life sciences with research experience of 15 years with original work in the field of nutritional sciences as evidenced by publications in standard journals/monographs etc. **Desirable** : Adequate Managerial experience in responsible positions in reputed Research Organisations. **Job Requirements**: The Director is expected to provide high level leadership in identification formulation and implementation of R & D programmes and projects of national importance in the field of human nutrition. He/She is expected to develop fruitful linkages with academic and professional institutions, Government and international research agencies. He/She will have the overall responsibility for the working of the Institute within the framework of the ICMR system and for ensuring an atmosphere conducive to creative work.

(B) AT THE REGIONAL MEDICAL RESEARCH CENTRE, Dibrugarh, Assam :

i) **DEPUTY DIRECTOR - (ONE POST)** (Scale of pay of Rs. 4500-150-5700) **Qualifications & Experience** : Essential : A) M.B.B.S. with 12 years research/teaching experience in Pathology/ Community Medicine/General Medicine (or 10 years research/teaching experience for candidates possessing M.D in the related fields). B) Original work as evidenced by publications in standard journals. **Desirable** : Research experience in the field of medicine, pathology or public health. **Job Requirements** : To handle research relating to non-communicable diseases like Cancer, Urology, Cardiovascular Diseases, Drug Abuse etc Besides he/she will have to assist the Director in the various activities of the institute including planning, executing and monitoring research projects on regional health problems, training programmes.

ii) **ASSISTANT DIRECTOR - (ONE POST)** (Scale of pay of Rs. 3700-125-4700-150-5000). **Qualifications & Experience** : Essential : a) MBBS with 12 years experience in research/teaching in Medicine/Pathology/Microbiology/PSM (or 10 years research/teaching experience for candidates possessing MD in related fields) b) Original work as evidenced by publications in standard journals. **Job Requirements** : To assist in research activities in communicable diseases of regional importance.

iii) **SENIOR RESEARCH OFFICER - (ONE POST)** (Scale of pay of Rs. 3000-100-3500-125-4500). **Qualifications & Experience** : Essential : MBBS with six years experience in Community Medicine/Epidemiology/PSM or MD in Community Medicine/PSM with two years research/teaching experience in related field. **Job Requirement** : To undertake/assist in epidemiological studies on various diseases of regional importance. **AGE** : Below 50 years for the post of Director/Deputy Director and below 45 years for the post of Assistant Director/Senior Research Officer. SC/ST candidates allowed relaxation in accordance with Govt. of India Rules in force. **Benefit of pension** is admissible. Private practice is not allowed. However, NPA as per rules of the Council is admissible to Medical Graduates only. Application forms and other details are obtainable from the office of the Director General, Indian Council of Medical Research, Post Box No. 4911, Ansari Nagar, New Delhi-110029. Forms duly completed should be sent to Director General, Indian Council of Medical Research, Ansari Nagar, Post Box No. 4911, New Delhi-110029 with a crossed IPO for Rs.8/- payable to DG, ICMR, New Delhi. SC/ST candidates are exempted from this payment. Incomplete and late applications or without postal orders will not be entertained. Any canvassing by or on behalf of candidates or to bring political or other outside influence with regard to selection/recruitment shall be considered a DISQUALIFICATION.

The Scourge of Consciousness

A Study of Michael Ignatieff's *Scar Tissue*

Mustufa Khan*

In the last two years we have had an amazing array of books which have definitely restrengthened our centuries-old faith in the book — as a companion, a source of knowledge and what not. They have in them an insightful meaning of relevance to us. Be it an autobiography, a novel, a collection of poems or essays. Favourite they are for their intimacy or familiarity to us and our time. Being one individual life we could not have lived in every place. Hence the similarity of experience and feeling is the kindred spirit of the books and the reader. We are bonded together in a far more vital network than any other the world can boast of. The bondship in the content blurs the distinction of form.

The book has caught up with the information explosion of this fast changing time. Of all the fields of knowledge, medicine and science have taken the lead. Man's search for making life better and more secure has given the greatest force to knowledge. Michael Ignatieff's *Scar Tissue* (Farrar, Straus and Giroux, New York, 1994) deals with Alzheimer's and Hawking's diseases. It is an attempt of the writer to comprehend the ultimate in life. The human tragedy is transformed into enriched consciousness of the victim, an equipment of the mind to defend the individual against the decline of his body. 'No antidote to fear compares with knowledge.' (196) Computer aided screening of the inner parts of the body is a marvel of science. Even this is a step in the direction of man arming himself against the unknown. Where would all this lead us to? 'Two thousand and five hundred years of the Western fury to know would reach its climax right there : watching the molecular chemistry of your own demise on live TV.' (194)

But what about us, the vicarious readers? What is the relevance of the Alzheimer's and the Hawking's to us? The book recreates reality for us. We have sometimes seen people who have lost their memory. They often remember something from their past but do not recall many other things. *Scar Tissue*

recreates just such an image of a woman victim. The forays into the world of mind in recent years is opening up new horizons. It has given a new dimension to characterization. The artistic mother of the narrator lost her memory with disastrous consequences to her family. Her husband's sudden death, the narrator's estrangement from his wife and children and his rupture with his intimate nurse-friend are caused by the neural change. A phenomenon untapped by writers and scientists till recent time. Even today we cannot be sure that we have mapped the mind. The novel in our time is witness to the terrifying aftermath of the onset of Alzheimer's : 'Father's name bobbed up into the stream of her speech like a stick or a piece of grass and then floated away.' (101)

Consciousness is the defining attribute of every individual. It is inaccessible to others. And to the individual himself it remains in him in patches of neurons and synapses. It is identifying mark of one's own being built up slowly over a long period of time, coalescing in it the essence of the experiences of the past and the hopes and expectations of the time to come. More distinguishing individually than the finger prints of one's own hands. Such profound is the change in the personality of a person afflicted with Alzheimer's that it is veritably a soul change. Such is the change that the narrator and his mother undergo.

A professor of philosophy tells the story of his mother's descent into neurological illness and the fast ageing process leading to her death. All this has a very unsettling effect on him. In his professional as well as private life things begin to fall apart. His mother of sixty has been painting amateurishly. Her husband has been working as a soil expert. He dies because of the shock of the deteriorating condition of his wife. The narrator has a brother, a doctor. Both of them sell their father's farm house to pay for the medical expenses of keeping their mother in a nursing home, with twenty four hours care. A nurse, Miranda, from Mindanao in Philippines, attracts him. This infatuation leads to separation of the narrator from his wife and children. His mother fixation disenchant the nurse, too.

*C.S. No. 90, Plot number 23-24, Near Jaffer Nager Sub Power Station, Malegaon-423 203.

In their ordeal is a trace of the scourge of consciousness. It begins quite early when the mother fumbles for the spatula : 'Where's that thing ...you...flip...thingwith?' (33) When she sets the table it is a reflection of the pattern of scar tissues, premature senile dementia. She puts the fork where the spoon ought to be, the knife where the fork ought to be. Then a plate with neither knife nor fork and a spoon far off in the middle of the table. She descends further into the neurological disintegration. Every morning the narrator levers her into the bath. He presses her arms and legs down into the water to make them move. Her neural change has disabled them. A growing concern for her son who feels he owes his identity and being to her. 'Sometimes at night, lying by her side, I think about all the memory that must remain inside her trapped within the circuits, denied speech yet still present in her mind.

She is the silent custodian of the shadow zone of my own life. She is the only one who can tell me what I was like before I began to remember, the only one who can decipher the first senseless scenes when memory begins.' (50)

In a lecture the professor of philosophy castigates the much vaunted American values of self mastery. They mistakenly believe that the patients can cure themselves given their mastery over themselves. However, their biological destiny belies all this. Very few had realized the severity of the Alzheimer's until it overtook the most confident of the Westerners, former president Ronald Reagan. We ordinary mortals have sure antidote to pain in the knowledge that our end is far from being known to us and we are creatures who must strive to know our Creator best.

CALENDAR OF EVENTS

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/ Officer to be contacted
Sept. 16-20, 1996	Training Programme on Modern Technologies for Information Handling	To familiarize users with modern technologies for Information Handling	All India Institute of Medical Sciences, New Delhi.	Dr. R.P. Kumar C/o B.B. Dikshit Library, All Indian Institute of Medical Sciences, Ansari Nagar, New Delhi - 110029
Sept. 23-25, 1996	TQM in Library & Information Services	To equip the participants with adequate knowhow of Information Services	Indian Institute of Management, Lucknow	Dr. Roshan Raina Librarian, IIML, Parbandh Nagar, off Sitapur Road, Lucknow, 226013
Nov. 25-27, 1996	National Seminar on Biotechnology : New Trends and Prospects	Theme: Education and Research in Biotechnology	Gurukul Kangri University, Haridwar	Prof. D.K. Maheshwari, Department of Botany, Gurukul Kangri University, Haridwar - 249 404
Nov. 26-Dec. 1, 1996	IAEWP Eighth World Congress to be held at Zagreb, Croatia	To promote International Peace	International Association of Educators for World Peace (IAEWP)	Dr. Nenad Javornik, IAEWP, Ulica Crvenog Križa 14/1, Zagreb 100 00, Croatia OR Dr. Surya Nath Prasad Reader, Janata College of Education, Post Box No. 113, Chandrapur - 442 401, Maharashtra
Dec. 5-7, 1996	ICDE Asia Conference on Open and Distance Education	Theme: Open and Distance Education	International Council for Distance Education Oslo, Norway	The Convener, ICDE Asia C/o AIAET, F-5-E, DDA Munirka, New Delhi-110 067.
Dec. 28-30, 1996	International Conference on Information Technology in Education and Training	Theme: Information Technology in Education and Training	All India Association for Educational Technology, New Delhi.	Dr. D.N. Sansanwal, School of Education, Devi Ahilya University, A B Road, Indore-452 001.
Jan. 29-31, 1997	16th Annual Convention and Conference on Access to Electronic Information	To focus on present changes, challenges, responsibilities and future probabilities in accessing electronic information	Society for Information Science, Bhubaneswar	Dr. P. Padhi C/o Department of Library & Information Science, Utkal University, Vani Vihar, Bhubaneswar-751 004

A Voyage of Vision

Dr. A.P.J. Abdul Kalam, Scientific Adviser to Defence Minister and Secretary, Deptt. of Defence Research and Development, Ministry of Defence, New Delhi delivered the convocation address at the 34th Convocation of the Indian Institute of Technology, Bombay. He said, "When a nation can build its own satellite launch vehicle (including various types of spacecraft), its own missile systems and when a nation can build its own nuclear reactor for generation of power, and build its own fighter aircraft using complex technologies, which are enormous integrated efforts, with multiple partners, our industries can also certainly be enriched with competitive technologies through industry, R&D and academia working with mutual trust..... Let us enter into a voyage of vision that would see India as a competitive developed nation, early in the coming decade." Excerpts

The nation, after independence, has stayed too long, for half a century as a 'Developing Nation'. So let us share a dream together, a dream to transform the nation into a 'Developed Nation'. What does it mean to be a developed nation? It means that the standard of living for the citizen should improve, the purchasing power should increase, the export potential of the country should grow and above all the nation should have high technology solutions for national security and national development through societal missions. All Indian people who are born and living should be healthy. Technology has to be the primary tool to bring fast transformation in national wealth

Learn with a purpose

Just ten days back I was in Pant Nagar in Uttar Pradesh, visiting the Govind Ballabh Pant University of Agriculture and Technology. This University is well known for its pioneering contribution to the green revolution in grain production. The farm experts took me to the student farms

and that is the lifeline and dynamic ambience of the University. I visited eight student farms, each farm of one hectare and allotted to a group of students with a designated leader and a co-leader. The students do all the work starting from the soil testing, ploughing, manuring, weeding, seeding, to protecting the crop, harvesting at suitable time as well as marketing the product. They earn about Rs 15,000/- per hectare per annum while learning. We witnessed the graduate scientists and technologists using their knowledge from seeding to marketing, in a team effort without any external help. Their work also involves use of various material technology and energy saving equipments. The work involves thinking as well as hardwork. The students see results and gain academically as well as financially. When I saw these research and student farms, we realised that this student community, when they come out of the University will have high self confidence, motivation to succeed and above all, a commitment to national wealth generation. These agricultural scientists, in their

professional life will be at home with the farmers for effective technology transfer. Self-reliance in food-grain production in the country has resulted from integrated efforts of agricultural scientists and technologists and farmers. Let us look at the other fields of technology.

Technological achievements

I would like to recall my experiences at four different theaters of action. It was 27th January 1996, when I was at Balasore to witness the successful launch of the extended range PRITHVI missile. This was in continuation of the PRITHVI missile systems trials after completing of the Army version of PRITHVI. In this, DRDO is the developing agency and the Armed Forces the user. Because of the strategic nature, the technology is fully indigenous and the results are achieved through intense R&D partnership with multiple institutions, private and public sector industries and also other R&D organisations. When the missile reached the right target and the mission was accomplished, I could see the pride and joy of the Indian scientists and technologists. This has established the confidence that 'we can do it' irrespective of the various technology control regimes like the MTCR, aimed against us.

The second event took place on 21st March 1996 at Sriharikota, the Indian Space Research Organisation's launch site, launching the Polar Satellite Launch Vehicle (PSLV). I watched the events from T minus 1 hours of the launch to T plus 18 minutes. A remote sensing satellite of one ton class was launched

(Contd. on Page 20)

SPREADSHEET

Social Indicators of Development for India through the Planning Era (5)

Item	Pre-Plan 1950-51	II Plan 1960-61	III Plan 1965-66	IV Plan 1970-71 1973-74		V Plan 1978-79	Annual Plan 1979-80	VI Plan 1980-81 1984-85		VII Plan 1989-90	Annual Plans 1990-91 1991-92		VIII Plan (Projections) 1992-93 1996-97	
Medical Care														
Total number of registered allopathic doctors per 1,00,000 population	17.0	21.0	21.0	27.6	*	31.0	*	39.2	41.8	46.0	47.0	*	*	*
Number of rural allopathic doctors per 1,00,000 rural population	*	6.9	*	13.6	*	*	*	13.8	*	*	*	*	*	*
Number of nursing personnel per 1,00,000 population	5.0	9.0	11.0	14.0	*	18.0	*	21.0	26.0	32.0	*	*	*	*
Number of nurses working in rural areas per 1,00,000 rural population	*	4.9	*	7.3	*	*	*	11.0	*	*	*	*	*	*
Basic health infrastructure														
Total number of beds of all types per 1,00,000 population	32.0	52.0	61.5	64.0	69.0	78.0	83.5	83.0	90.0	97.0	95.0	*	*	*
Number of beds in hospitals and dispensaries in rural areas per 1,00,000 rural population	11.0	14.3	15.1	*	*	*	*	16.3	18.4	17.7	*	*	*	*
Number of primary health centres per 1,00,000 rural population	0.22	0.71	1.15	1.16	1.14	*	*	1.08	2.28	3.33	3.45	*	*	*
Number of rural dispensaries per 1,00,000 rural population	1.8	2.1	2.0	*	*	*	*	2.2	2.4	2.1	*	*	*	*
Number of hospitals per 1,00,000 rural population	0.40	0.31	0.33	*	*	*	*	0.35	0.28	0.49	*	*	*	*

*denotes information not available

Notes: (i) Years representing as column heading do not always correspond to the respective Five Year, or, Annual Plan periods (e.g. the year 1978-79 for the Fifth Plan period).

(ii) Again, the data presented generally pertain to the years indicated in the table though in some cases they pertain to the periods close to those years.

Source: EPW Research Foundation: Social Indicators of Development for India - 1, *Economic & Political Weekly*, May 14, 1994.

(Contd. from page 17)

into a polar orbit by PSLV powered by largest solid rocket booster of world class. A series of planned events took place one after another and at T plus 18 minutes, the 4th stage injected the IRS-III in the polar orbit. This represented the culmination of multiple technologies and mission driven efforts leading India to achieve its capability of launching IRS class of spacecraft from Indian soil.

The third event took place at Kalpakkam, at the Indira Gandhi Centre for Atomic Research. It was the commissioning of the Nuclear Fuel Reprocessing Centre in April 1996. This is a technological marvel of nuclear science and technology, chemical engineering, safety engineering, remotely operated technology and instrumentation. This is an essential technology for our nuclear power programmes.

I witnessed the fourth event just a week ago. It was the composite wings designed for the LCA (Light Combat Aircraft) going through the structural dynamic tests. This is one of the very important milestones before flight test of the LCA. These composite wings were designed and developed by a national team lead by a CSIR laboratory, the NAL (National Aerospace Laboratories) for the Aeronautical Development Agency (ADA). While NAL is the developing agency for the wings, HAL (Hindustan Aeronautics Ltd) will be the prime production agency. Presently the whole aircraft is going through the Ground Resonance tests that I witnessed. The results are the designers delight. The first flight of LCA is planned for February 1997.

Technology and technology transfer capability

When I look at these events and experiences in an integrated way, I am inspired to share with you some interesting thoughts. Firstly, what I have seen represents the results of four major R&D organisations in intense partnership with industries and academic institutions. By my assessment, over 100 R&D labs and 50 academic institutions would have participated in all the missions which I have highlighted. Secondly, this establishes that indigenous design capabilities have been generated for aerospace systems, nuclear systems and also the technologies needed for these have been generated. At least a minimum of 20,000 scientists and thousands of technicians and supporting staff from about 20 different technological disciplines have contributed and an equal number from the technological community and researchers have also participated.

Of course, I have highlighted a few events. Many more technology successes can be identified in variety of areas. The technological revolutions in the areas of food, agriculture, communication and industrial production are worthy of note. It can be seen that for the industries, the Government funded R&D institutions have several different technology packages to offer. When an organisation has indigenous design and development capabilities, the extent to which indigenous material and sub-systems can be incorporated in a system can be easily maximised. For our industries, it is a great opportunity to acquire technologies from Indian R&D labs. Instead of fabri-

cation technique coming to our industries from abroad, technology and technology transfer can take place from our labs combined with academic institutions. While example of agricultural technology which I mentioned assures food security, employment and wealth generation, the other four technology areas not only take care of national security but also build core strength for a modern nation. This is possible only when integrated technology cuts across all other areas. However, it is important that we build on this strength and create many more wealth generating opportunities to establish economic security to the country. That is how Technology vision movement was born.

II. TECHNOLOGY VISION 2020

In November 1993 the Technology Information, Forecasting and Assessment Council (TIFAC) took a decision that technology forecasting should be evolved for the period 2000-2020. Seven task forces and mega task force with 11 panels were formed. The various programmes included Agro Food Processing, Electronics, Healthcare, Power, Aviation, IPR related, Telecommunications, etc. The task forces were led by ten industrialists, industrial associations, and eight experts from R & D institutions, Government and Academia. Nearly 500 experts worked in this task force and panels. The technology vision 2020 document will be released in July 1996. The major recommendations will lead to the national development coupled with generation of wealth and employment potential.

Action plan from Technology vision document

Our Agricultural productivity should aim to the top five places from the present level of 54th in the world. India should build commercial and military aircraft on a design driven programme and not on fabrication or licence production mode. In the machine tools production, India should get transformed by 2020 into a leading exporter of machine tools, CAD-CAM and software driven. In the textile sector, India will be a leading textile producing country in the world with a major eco-friendly textile exports from 2010. Genetic engineering should lead to better pest control, fungal/viral/herbicide resistance, extension of shelf life and storage life of various food articles. India needs to work to ensure that over 50% of the present pharmaceutical and cosmetic supplements, essential oils etc will be replaced by herbal products. Navigation should be made possible throughout the year enabling vessels to navigate at least 18 hrs per day from the present 12 hrs. per day. This will lead to large scale transportation, in energy efficient way, of various products from Punjab to Bengal. Management of diseases specially in developing countries can be achieved only by preventive action and by deployment of cost effective and affordable therapeutic intervention. More than a quarter of the health burden is due to infectious diseases such as AIDS, T.B., acute respiratory infections, etc. In addition to immediate curative action, sustained technological intervention for diagnostic and preventive methods can ensure control of these diseases.

Partnership of R&D institutions and industries

These are some of the representative areas of the Technology Vision 2020. The documents, 22 in number, also provide the methods and processes of achieving the vision. The industry-R&D partnership will have to translate this vision into a reality. Just in time a forerunner technology development programme with scope of commercialisation towards industrial needs, the Government has approved the establishment of a Technology Development Board at DST (Department of Science & Technology) with the cumulative funding available of Rs. 430 crores and with additional annual funding of Rs. 100 crores. This amount comes from the cess collected from the import of technology. Of course this initiative should be used in a big way by our Indian industries to multiply and to enhance the industrial R&D. Needless to emphasise that onus of bringing about qualitative changes in industry through flooding of technologies rests as much with R&D units and Universities as with the Industry itself. The users should place demands on our R&D labs and industries system in advance so that they will be continuously involved in performing.

III. AN UNIQUE VOYAGE FOR NATIONAL DEVELOPMENT

When a nation can build its own satellite launch vehicle (including various types of spacecraft), its own missile systems and when a nation can build its own nuclear reactor for generation of power, and build its own fighter aircraft using complex technologies, which are enormous inte-

grated efforts, with multiple partners, our industries can also certainly be enriched with competitive technologies through industry, R&D and academia working with mutual trust. Industries enriched with R&D is an important index for national growth.

What can be the vision for a nation like India, that can trigger the minds for a change? Can it be the doubling of GDP? Will it be sufficient if we achieve this? Do we need to increase our productivity by 20%? All these are only aspirations that need to be linked with a vision and which only can trigger the minds. What can be this vision? The vision for the nation has to be to "Transform India from a developing nation status to that of a developed nation status". We have to use this national urge as a trigger.

Friends, so far we have discussed technology and its transformation and saw its manifestations. Technology is the wealth generator and gives economic strength to a nation. It is amenable to partnership of multi institutions. We have now an ambience of Technology Development Board and documents on Technology Vision 2020. It is also the realisation of our industries and R&D establishments, for competitive edge globally, and our instrument is the only indigenous design and technology. Only a young community like you friends, can make the technology vision a reality as you can think and dream big and also achieve high. Let us enter into a voyage of vision that would see India as a competitive developed nation, early in the coming decade.

Towards an Agenda for Peace

The Academic Staff College of the Guru Nanak Dev University, Amritsar prepared a questionnaire at the instance of Government of Upper Australia who has called for a worldwide youth initiative to draw 'an Agenda for Peace' to be submitted at PEACE SUMMIT, 96, so as to demand concrete actions for security, preservation and reinforcement of peace and human rights all over the world. The questionnaire consisted of the following questions: (a) What are your visions and ideas of a better world?; (b) What do you consider the most important threats against peace?; (c) What actions be demanded on behalf of youth in the Agenda for Peace?; (d) What actions are required for — (i) confidence building, (ii) Disarmament, (iii) Human Rights, (iv) International terrorism and organised crime; and (e) The actions youth has taken in for peace.

The Academic Staff College, at its 25th General Orientation Course, administered this questionnaire. The participant teachers collected information from the students (aged upto 27 years) as an exercise in the research methodology. The information was analysed and a number of startling features have come to light. Food for all and equal opportunities to all irrespective of racial or ethnic differences are the major issues which should form the vision and idea of a better world. Corruption, terrorism and child labour have brought miseries to the masses struggling for social justice and right to live. These factors not only deny social justice

but also education, food and health to the downtrodden and socially, economically, ethnically and racially segregated sections of the world. As a result, ethnic conflicts, terrorism and race for nuclear and chemical weapons has engulfed this world and especially the third world countries who see each other with contempt. These countries also face threats from poverty and unemployment. The political system has so corrupted that the proverb "as a hunter destroys the peace of the forest, a politician destroys the peace of a nation or a country" — seems to have become a reality.

So far as the actions demanded on behalf of world's youth in the agenda for peace are concerned, the youth wants an unending ban on lethal and especially chemical weapons, drug production and sale. Interaction among the youth of various countries will increase the understanding of ground realities besides providing platform for mutual interdependency to fight these menaces. The youth demand preaching of one religion i.e. humanity and universal brotherhood and tolerance. Abolition of child labour, child abuse and gender bias would help these vulnerable sections take active part in the process of country's development and spreading of peace throughout the world.

To build confidence among masses, the leaders having moral faith in actions and deeds should come forward and reinforce the moral fabric of the nation. Such leaders by taking youth into con-

fidence should build an egalitarian system in which racial discrimination and exploitation has no place. Effective World Human Rights Organisations without racial/social/geographical biases would curtail terrorism and race for weapons. Giving sufficient power to pass social, economic and other strictures against offending nations will provide arms to United Nations Organisation (UNO) to cruise smoothly through multifaceted difficulties faced by this world. Of course, UNO should not be allowed to become the big arm of few rich and affluent countries. In this way, confidence of the developing countries will increase thereby checking terrorism and organised crimes in this world. Lack of public awareness/education among the people of third world countries was the major hindrance in their development and their lust for power, wealth and status which created difference and inequalities.

Youth is ready to share the responsibility of educating the masses, spreading peace and promoting communal harmony but the leadership rather than trusting them, use them for grabbing power and creating terror among the masses. Some youth bodies are playing important role through street plays, discussions and other group activities. Of course, they are not trained to take up such activities with zeal. This is the bankruptcy of the present socio-political system which is not in a position to provide moral fabric and cohesive force to the society at the top and family at the bottom. Youth want a strong

family institution which could provide emotional cushion to the violent youth of the present age.

IIT Delhi Convocation

Mr. S.R. Bommai, Union Human Resource Development Minister, said though the participation of IIT-trained men in technology development mission projects was commendable, the success of all development strategies depended vitally on the progress made in agriculture. He was delivering the convocation address at the IIT Delhi recently. Giving a clarion call to IIT graduates to diversify their activities into agro-based industries, the Minister said agriculture industry was the greatest employer in the country which ought to be "rationalised, mechanised and modernised."

"Developments have taken place in food crops, horticulture, fisheries due to efforts put in by our scientists and enterprise by our farmers but it is necessary to further modernise the sector to greater productivity resulting in an efficient export-oriented agricultural economy," Mr. Bommai said

He suggested use of biotechnological methods for increasing agricultural production, efficient utilisation of agricultural wastes and use of renewable sources of energy for local community development to face the challenges faced by the country.

"Developed countries have found solutions to their problems by placing faith on modern technologies and with the help of scientists and engineers. We too should make science and technology a powerful tool for sustainable development, including rural development," Mr. Bommai added.

He called for further intensification of cooperative efforts between IIT and Ministries of Agriculture, Food Processing and Water Resources to work in areas of oil extraction from seeds, village industries, ground water management, agriculture equipment design and agro waste management.

On scarcity of funds and land constraints, he, however, said "this does not apply to human knowledge."

"We have to adopt appropriate development strategies incorporating modern technological methods to empower the disadvantaged sections of our society to help themselves," Mr. Bommai stressed.

Stating that the new economic policies had created a favourable environment for growth of economy and employment opportunities, Mr. Bommai expressed confidence that if progressive policies were continued, the country would develop very fast economically. Appreciating the interactions and linkages encouraged between IITians and the captains of industries for qualitative and productive technological changes, Mr. Bommai called upon the IIT alumni settled abroad to help get more foreign direct investment in the country.

Prof P. J. Kurien, Chairman, Board of Governors, IIT, Delhi, in his address, remarked that in view of the liberalised economy where IITs had a significant role to play, a proposal had been submitted to the Government to double the student strength and also improve faculty competence to raise standards in technical education in the Ninth Plan. "The IITs are also planning to have a world class business school which will

provide close linkages between curricula of technology and business school programmes and equip IIT students to make their mark in new global economy," he informed.

Stating that research and development activities at IITs presently spanned a number of frontier areas, including information technologies, communications, applied electronics, biotechnology, biomedical engineering and energy studies including Non-Conventional Energy sources, Prof. Kurien said the onus lay both on the Government and the scientists to bring about widespread application of modern science and technology to socio-economic development.

Citing the alienation of elite scientific and technology community from the rest of the society as a reason for chronic problem of brain drain, Prof. Kurien appealed to the NRI alumni of IIT to be more forthcoming in committing themselves to national development. He also suggested evolving a scheme of educational loans to students on concessional terms for exploring the possibility of IIT students themselves supporting the academic programmes of the institute.

Prof V.S. Raju, the IIT Director, in his annual report, highlighted the achievements and activities of the institute including the international collaborations it had entered into.

Those who received their degrees included 142 Doctorates, 380 Masters of Technology, four Masters of Design, 34 M.Sc and 11 DIIT students and 274 Bachelors of Technology.

Prof. Kurien also gave away

awards and medals to 47 meritorious graduates on the occasion. The chairman of some of the ITC Group Companies, Mr. Yogesh Chander Deveshwar, and Prof. Shrinivas R. Kulkarni, from Department of Astronomy, Caltech, USA, were also conferred the Distinguished Alumni Award.

INSA Awards 1996

The Indian National Science Academy (INSA) will honour Prof Antony Hewish, Nobel Prize winning British astronomer with this year's INSA-Vainu Bappu memorial award.

The British scientist who received the 1974 physics nobel prize for the pioneering discovery of Pulsars celestial source of weak radio signals is expected to be in India to receive the award later this year.

The academy also announced the names of 17 Indian scientists who have been selected for various INSA medals.

These include Dr A.V. Narlikar, a senior scientist at the National Physical Laboratory (NPL), New Delhi (Home Jehangir Bhabha medal), Dr D.V. Singh, Director, Central Road Research Institute (CRRI) (Guru Prasad Chatterjee memorial lecture award), Prof B.M. Johri, Delhi (Sunder Lal Hora medal), K.L. Chopra, IIT Kharagpur (P.C. Mahalanobis medal), Prof R. Raghavarao, Physical Research Laboratory, Ahmedabad (K.R. Ramanathan medal), S.K. Jain of National Botanical Research Institute, Lucknow and Prof V.S. Rama Das of school of life science, Hyderabad University (S. B. Saksena memorial award) Dr S. Nityanand of Central Drug Research Institute, Lucknow

(Dhanwantari Prize), Dr (Mrs) K.J.Ranadive, Bombay (Prof B.D. Tilak lecture) and Prof S. Ranganathan of Regional Research Laboratory, Thiruvananthapuram (Prof S. Swaminathan 60th birthday commemoration lecture).

Student Tutoring Programme

University and college students acting as volunteer tutors in local primary and secondary schools is known as Student Tutoring Programme. Typically the selected student tutors of the Madurai Kamaraj University help the schools on wednesday morning sessions for one semester i.e upto Dec '96. This programme is being organised by the Department of Education, Madurai Kamaraj University and is sponsored by the British Petroleum, London. The programme is being organised by the University for the last four years.

Madurai Kamaraj University recently organised a one day conference of college Co-ordinators, Student Tutors of the colleges and the Link Teachers to orient the new entrants into the programme. The conference was inaugurated by Professor K. Aludiapillai, Vice Chancellor, Madurai Kamaraj University.

Students helping students is the main idea of the programme. Under this programme, the selected student tutors from universities and colleges help the pupils with learning difficulties, assist in organising literary/science clubs, help in literacy and adult education programmes, arrange cultural activities/programmes, correct composition notes, provide different learning experiences, prepare software for teaching

the subjects, assist in sports and games, help to improve the garden, help in developing hobbies among pupils, assist in doing field work, etc.

By acting as student tutor, the University student serves as a link between the University and the school system. Now the programme is extended to eight colleges for benefiting larger numbers on a voluntary basis. The assistance from British Petroleum is part of their paradigm "Arriving for a College Education Initiative" which supports a variety of activities all over the world, particularly in U.K.

86 Students from university and colleges participated in the programme. The programme will serve 80 selected schools in five revenue districts of the Madurai Kamaraj University.

International Sports Congress

The International Congress on "Management of Physical Education & Sports and its Role and Impact on Global Harmony and Peaceful Co-existence" which was proposed to be held on 11-15 January, 1997 (*University News* 8 July 1996) will now be held on Jan 11-15, 1998 at Gwalior, India. The Conference is being organised by the Alumni Association of the Lakshmibai National Institute of Physical Education (LNIPE), (Deemed University), Gwalior.

The last date for receipt of abstracts of scientific papers proposed to be presented at the Congress is now 1 May 1997.

Further details may be had from Dr. Jasraj Singh, Organising

Secretary, International Congress, LNIPE, Gwalior, India.

Information Management in 21st Century

The Academic Staff College of Guru Nanak Dev University, Amritsar, recently organised a Refresher Course on 'Information Management in the 21st Century'. Prof B.R. Batra, Dean Academic Affairs, in his concluding remarks said, "Machines can't do everything, though these can do many many things, yet human touch is necessary for compatibility and proper interaction between the man and machines." Discussing the role of the librarians in the future libraries, he maintained that the importance of libraries and the librarians would continue in the 21st Century, but the roles and duties of librarians would change.

Attended by over 30 participants from Punjab, Chandigarh, Haryana, Himachal & Madhya Pradesh, the course was inaugurated by Prof. P.N. Kaula, President, Indian Library Association.

Vikram Sarabhai Awards

Six distinguished scientists have been selected for the 'Hari Om Ashram Prerit Vikram Sarabhai Research Awards'. These include Prof. N. Balakrishnan of the department of aerospace engineering at the Indian Institute of Science, Bangalore, Prof. Bidyut B. Chaudhari, founding head of computer vision and pattern recognition of the Indian Statistical Institute, Calcutta, Mr. Nagesh N. Rao of the Physical Research Laboratory, Ahmedabad, Mr. Maddali Vivekanand of the National Centre for Radio Astrophysics, Pune, Mr. K. Nagachen-chaiiah, head of the sensor electronics division of the Space Application Centre, Ahmedabad and Mr. Y.N. Bhushan, group director of the mission development, the Indian Space Research Organisation (ISRO), Bangalore.

The awards, instituted on the 55th birth anniversary of Vikram Sarabhai, founder of the Physical Research Laboratory on August 12, 1974, by the Hari Om Ashram, Nadiad, carry a medal and a cash prize of Rs. 25,000.

scientific views and develop linkages among Innovations — Entrepreneurship — Investment and Planning.

The technical programme of the conference will consist of plenary lectures, lead papers, contributory papers and poster presentation and discussion with NGOs on following topics : Stress tolerance mechanisms, screening techniques, selection traits, agro-technology, yield benefits; Plant breeding and biotechnology approaches in stress tolerance; Genetic aspects of plant mineral nutrition, toxicity and resistance to insect pests and diseases; Biodiversity and potential crops for degraded/marginal lands in fragile environments; Role of microbes and bio-organics in sustainable crop production; Soil erosion, water and nutrient management in fragile environments; Monitoring, conservation, utilisation and optimisation of resources in dryland and other stressful environments; Integrated farming systems, alternate farming systems including allied agro-based enterprises, crop diversification; Food security, socio-economic and environmental aspects; and Technology assessment, transfer, acceptance and linkages among innovation-entrepreneurship and investment, international cooperation.

Further details may be had from Prof. Dr. D.P. Singh, Chairman, Organising Committee and Dean, College of Agriculture, CCS Haryana Agricultural University, Hisar-125004 or Dr. R.K. Behl, Convener, Department of Plant Breeding, CCS Haryana Agricultural University, Hisar-125004.

News from Agricultural Universities

Sustainable Crop Production in Fragile Environments

The CCS Haryana Agricultural University, Hisar, in collaboration with the Max Müller Bhavan, New Delhi, and the Department of Science and Technology, Government of India, New Delhi, proposes to organise an international conference on 'Sustainable Crop Production in Fragile Environments' at Hisar on 25-

28 November, 1996. The objectives of the conference are (i) to review the current status of research on sustainable crop production in fragile environments; (ii) to discuss the role of appropriate technologies and alternate farming systems to enhance agricultural production in fragile environments; and (iii) to exchange

News from UGC

Countrywide Classroom Programme

Between 1st to 7th September, 1996 the following schedule of telecast on higher education through INSAT-ID under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 6.00 a.m. to 7.00 a.m. and 1.00 p.m. to 2.00 p.m. The programme is available on the TV Network throughout the country.

1st Transmission

6.00 a.m. to 7.00 a.m.

1.9.96

"What is Happening to Our Climate?"
"Neem - The Wonder Tree"
"The Week Ahead"

3.9.96

"Catalytic Converter- A Hope for Green Air"
"Museums Around the World: British Museum—London"
"Maxillofacial and Oral Surgery-Part II"

5.9.96

"Harnessing Sunlight Through Fibre Optics"
"The Forests are Dying"
"Kalaripayat"

7.9.96

"Thyroid - The Quiet Workshop"
"Social Evils"
"Coconut Production Technology"

2nd Transmission

1.00 p.m. to 2.00 p.m.

2.9.96

"The Week Ahead"
"The Physics of Music-I : The Magic Flute"
"Clouds: Form of Condensation"

3.9.96

"Antar Jyotir, Bahir Jyotir"
"Speech Communication"
"Acupuncture Impressions Part I"

4.9.96

"Voice Communication Facilities through Telecom"
"Study on Metamorphic Rocks — A Modern Approach"
"Neem - The Wonder Tree"

5.9.96

"Introduction to Marine Archaeology : Heritage from the Depths"
"Sitamau: A Repository of Indian Heritage"

"On Reaching the Parents: Optimum Development of the Individual"

6.9.96

"Pest Story - Part I"
"Introduction to Calculus"

7.9.96

"Science Quest 95-96 - Part I"
"Cacti"
"Traffic Safety First"

Hindi Telecast

प्रातः 6.00 से 6.30 बजे तक

02.9.96

"जोधपुर के बलुआ पत्थर-भाग 1"

04.9.96

"संत कबीर - भाग 1"
"प्रकृति पुत्र: आदिवासी"

06.9.96

"स्कूबा डाइविंग"

News from Abroad

DAAD Fellowships for Postgraduates

The German Academic Exchange Service (DAAD) offers Fellowship Programmes for Indian Postgraduates. The essential prerequisites are that the candidates must possess at least a Master's degree from an accredited institution of higher education in India or abroad (provided the latter is recognised by the appropriate authorities in the Federal Republic of Germany). They must be residing in India at the time of application. They must sign a bond vis-a-vis their government/university guaranteeing their return to India after their stay in Germany. Employed candidates must produce proof of their employers' undertaking to re-employ them upon return. Candidates must have a recent-dated letter of placement from a faculty member at a German university or from an equivalent mentor at a

research institute/laboratory, or, in the case of applicants for fellowships in the special postgraduate courses must be recommended by the university or "Fachhochschule" in question. Applications must be routed through proper channels, where required.

A. Long-term Fellowships ('Jahresstipendien')

These fellowships are offered primarily through DAAD's partner organisations in India, as part of the Cultural Agreement between the Government of India and the Federal Republic of Germany: The Department of Education, Ministry of Human Resource Development, New Delhi (HRD), the University Grants Commission, New Delhi (UGC), and the Council of Scientific and Industrial Research, New Delhi (CSIR).

Applications are invited in the fields of : Agriculture, Com-

munication/Information Sciences, Computer Science, Engineering, Forestry, Horticulture, German Language and Literature/German Studies, Humanities, International Law, Linguistics, Mathematics, Natural Sciences, Social Sciences, Veterinary Science, and Sports.

Fellowships are for one year preceded by a two-to-six, most commonly four-month German Language course in Germany arranged and funded by DAAD. Upon application and proper documentation they are extendable upto another 12 months.

Highly qualified candidates with a letter of nomination from a former DAAD or AvH fellowship holder, who fulfil the application requirements below and rank at the top of their discipline/profession may apply to DAAD, New Delhi directly. The deadline for submission of complete applications to DAAD, 176, Golf Links, New Delhi - 110003 is : November 10, 1996.

B. Research Fellowships ('Forschungsstipendien')

Open to junior scholars at Indian universities or regional institutes of university standard (deemed universities), research institutes of national importance in India, and the Indian Institutes of Technology (IITs).

Specific Eligibility Requirements and Provisions: The candidates may not be more than 32 years old at the inception of the fellowship period (i.e. born on or after October 01, 1965). They must have at least two years of teaching and/or research experience after obtaining their Master's degree. Candidates who are permanently employed will be given preference. Exceptions will be considered on an individual basis.

C. Sandwich-model Fellowships ('Sandwich-Stipendien')

Open to junior scholars regis-

tered for doctorate degrees in India. They may carry out research alternately in India and Germany, under the — previously agreed — joint supervision of an Indian and German mentor. Failure to obtain such prior agreement will disqualify the candidate from the competition for this type of fellowship.

Specific Eligibility Requirements: The candidates may not be more than 36 years old at the time of the inception of the fellowship period (i.e. born on or after October 01, 1961). They must be registered for their Ph.D. degree in India at the time of application.

D. Scholarships for Postgraduate Courses with Relevance to Developing Countries ('Stipendien fuer entwicklungslaenderbezogene Aufbaustudiengänge')

Universities and "Fachhochschulen" in Germany offer postgraduate degree or certificate courses with special relevance to developing countries, some of which are offered in English. They are open to qualified applicants (at least a B.Tech., B.Engg., or B.Arch. First Class) regardless of DAAD support. Applications for admission only may be addressed to the German institutions directly, or via DAAD, New Delhi.

DAAD offers a small number of scholarships to those admitted for participation in these courses which are listed in DAAD's brochure "Scholarships in Germany for Postgraduate Courses with Relevance to Developing Countries 1997/98". This brochure has been distributed to the relevant agencies in India.

These scholarships are also offered in Bhutan.

Specific Eligibility Requirements: Candidates must have a Master's degree in the relevant

subject. (Unless expressly stated otherwise, Ph.D. holders are not encouraged to apply.) They must have two years of professional experience after obtaining the core qualification. They must be permanently employed and must be sponsored by their employers. For most courses, candidates may not be older than 36 years at the time of application.

Participation in these courses does not lead, and DAAD fellowships offered under this programme cannot be used or changed to lead, to a Ph.D. degree in Germany.

2. Short-term Fellowships ('Kurzstipendien')

These fellowships are primarily offered through the University Grants Commission (UGC), New Delhi, to scholars registered for a Ph.D. at universities or research institutes in India, to enable them to collect material in Germany for the completion of their doctoral thesis. The fellowships are for three to six months in the fields of Economics, Education, History, Philosophy, Mathematics, and the Natural Sciences.

Specific Eligibility Requirements: The Candidates must not be older than 32 years, (i.e. born on October 01, 1965 or later) at the time of the inception of the fellowship period. They must be registered for their Ph.D. with a university or research institute of university standard. The research must be at an advanced stage at the time of application.

UGC will announce the availability of these fellowships and set its own deadline for the submission of applications. Applications to DAAD, New Delhi directly are also possible. DAAD's deadline for submission of complete applications is: October 18, 1996.

BOOK REVIEW

Useful Contribution

H. S. Chopra*

Peter Coffey. *The Future of Europe*. Aldershot : Edward Elgar, 1995. Pp. viii+204. Price - not stated.

Since the end of the Cold War, Peter Coffey's *The Future of Europe* is one among several other studies, that have made appearance on more or less comparable themes. The principal objective underlying most of these studies, as is the case with the one under review, has been to examine "the present situation and to make proposals for the future" (p. 16). Doubtlessly, there exists excitement among the concerned academic and political luminaries about the nature and salience of the newly emerging United Europe; and it becomes all the more accentuated, for noteworthy initiatives have since been taken to provide a certain groundwork for the new edifices to be raised thereon.

Already, consequent upon the adoption of the Single European Act (1987), European Single Market (free from non-tariff barriers) was slated to have come into existence by the end of December 1992. But as the study under review shows none of the member states had succeeded in transposing all the requisite 214 directives into national laws. Surprisingly enough, Germany (166) finds itself in the company of Greece

(159) and Ireland (167), all the three listed as major laggards, while Denmark (197), Italy (195) and the UK (189) are among the leading member states having transcribed largest number of (EC) measures into legislative enactments (source quoted at p.31, *Agence Europe*, 14 June 1993). On movement of persons from one member state to another, only seven countries, and not nine as stated by the author at p. 32 (included in the Shengen Agreement — Germany, France, Belgium, Luxembourg, Netherlands, Spain and Portugal) have opened up their borders. In any case, this means that 1 January 1993 could be considered as an important deadline when all the member states were expected to have adopted the EC directives as many as they could without, however, endangering their internal security and or health requirements.

Another major historic development in the evolution of the European Community (EC) takes place in February 1992 with the conclusion of the Maastricht Treaty on European Union. After ratification of this Treaty, through varying legislative processes followed by each member state, the EC came to be redesignated as the European Union (EU) since 1 November 1993. But, then, the designation, EU, impressive as it is, seems to be somewhat misleading. For, in any case, it, by no

means, indicates that EU is in any way comparable to the existing federal or confederal polities, such as the US, Indian Union, or even the Swiss Confederation. Nor does the EU in question conform to the founders much cherished ideal of the "United States of Europe", which had found expression in Sir Winston Churchill's address at the European Congress held at the Hague in 1948. Much earlier, on 28 January 1925, in his address to the French Chamber of Deputies, the French Prime Minister, Edouard Herriot, had accorded his approval to the idea of the "United States of Europe". Since then more than 70 years have elapsed, but the "US of Europe" continues to be a distant dream.

Nonetheless, European Union (constituted as it is today) bears unique salience in that it differs from all the known classical forms of political governance. Indeed, Edward Heath, one of the leading protagonists of United Europe, had described in early 1970s the European Unity movement as one of the greatest inventions of the twentieth century. One could perhaps go a step further and commend it as the most splendid gift of the present century to the incoming twentyfirst century. It is only hoped that the European Union paradigm which is premised on the hypothesis "security and economic interests at the regional level are indivisible" would find enhanced acceptability, and be adopted in the coming decades (such as in South Asia) with a view to bringing an end to the internecine feuds among the member states within different

*Professor, West European Studies Division, School of International Studies, Jawaharlal Nehru University, New Delhi - 110 067.

world regions. Perhaps, the new post-Cold War order could be structured as a global system of regional blocs, which could then formulate their strategies of competition and cooperation, so as to foster inter-dependence at the global level, with the prime objective of making possible productive peaceful coexistence.

The author, at the very outset, had his doubts about actualization of the "US of Europe". He could not believe that European Unity could be firmed up in the case of all the member states at one speed. Therefore, he would have preferred to entitle his study as "Europe a la Carte", but then respecting sensitivities of the EC Commission, he chose to give an "elegant" title to his study *The Future of Europe*. The author regretfully finds that major obstacle that continues to hinder fulfilment of the Europeanists' dream of United Europe is national sovereignty. His remarks in regard thereto deserve to be noted:

"Our Europe with its wonderful and irritating national differences could not in the immediate future become the US of Europe because we cherish our national differences too much". (p.1)

In late 1991, when the Maastricht Treaty was being drafted, the "federal" concept had to be given up under the British pressure. And also perhaps, suiting the electoral logic at that time at home, Britain had to opt out of the Economic/Monetary as well as social union, which meant that the foundations for a multi-speed Europe had been laid there and then clearly. Furthermore, if Europe

could not be federal, it had to be something different. Apropos, in October 1993, at the fortieth anniversary of the Council of Europe, the late French President, Francois Mitterrand favoured the idea of European confederation (p. 161). The author, himself, while endorsing most of Alan Sked's institutional reforms (Pp. 80-88), commends the EU to adopt the Swiss Confederal model.

In any case, debate continues on the future of Europe, even after the Inter-governmental Conference began its deliberations since March 1996. Wide divergences exist among the political elite of the member states even on the question of EMU. In April 1996, because of the controversy whether EMU has to actualize by 1 January 1999, and also to adopt common currency, alongside the national currencies of the member states of the EU by 1 January 2002, European Commission had organized "Round Table on the Euro — The Communications Challenge" on 22-24 January 1996 at Brussels. Evidently, European Commission is seized of the hyper-sensitivity underlying the EMU (which is more or less to be shaped after the Bundesbank, p. 107), and more particularly the European single currency. It is for this reason that the Commission organized open debate among the leading elite of different member states so that a consensus could perhaps be found.

Here, incidentally, one could compare European Unity with unification of Germany, which was accomplished in 1990 within less than a year of the fall of the

Berlin Wall. The speed at which German unification was accomplished explains the deep symbiosis that existed between the two German peoples in their historical, social, cultural, religious, linguistic and civilizational contexts. As soon as the ideological constraint, imposed exogenously, was lifted, the concept of Germanness prevailed, and German unification became a reality. In the case of the member states of the EU, there were powerful historical impulses that pitted them against each other. It was this ruinous scenario of the conflictual political dynamics that had to be changed at the European level. Else, Europe, shorn of its imperial appendages, would have been reduced to an agglomeration of small or medium ranking states, engaged once again in their deep-rooted historical rivalries. As a result, this would have meant their loss of status globally. Already, since the end of World War II, gravitational centre of global power politics had shifted to outside of Europe. European powers for the first time in modern history had not only been eclipsed from the global power scene, but also divided among themselves into two rival ideological groupings, each dependent for its political survival either upon a non-European power, the US or the somewhat adulterated European power, the USSR. Under the circumstances, regional integration alone could provide the answer and open up new vistas of regaining the lost momentum in the global economy and also their placement in the post-War global political and strategic setting.

As such, the prime objective underlying European integration has been to arouse European consciousness in a way that attitudinal change takes place in each member state, setting aside their historical animosities, pooling up their resources, working together, and building up their industrial capabilities, so that they could collectively compete with the US and Japan. In the basic scientific research, Europe has not been behind the afore-cited two industrial giants. During the period 1980-1989, as stated by Manfred Maciotti in another study, Europe (EEC plus EFTA) has 27 Nobel Prizes against 42 for the US and 2 only for Japan. Obviously, nation-state had lived up its utility. Rather, it was felt that excessive nationalism had been the principal cause of their cataclysmic wars in the past : Hence the felt need to move away from it, and devise new political design i.e., of supranationalism, and set up the US of Europe. This was easier said than done. Jean Monnet, father of the European unity movement had stated in the early 1950s that he had known de Gaulle and Harold Macmillan for nearly thirty years, and that during that period, he had not seen an iota of difference in their political behaviour. In other words, he believed that it is difficult to change human nature. But then he averred that a network of new institutions could engender a new environment, and human beings have enormous capability to adjust themselves to it. Hence, there began an ambitious programme at creating new supranational institutions in the form of the ECSC,

EEC and EURATOM, and subsequently even if somewhat their rival grouping EFTA (that was based on Stockholm Convention of 1959, and not 1963, as the author says at p.32) as well. Despite the jerks and jolts, that they have experienced over the decades, these institutions have acquired a new systemic meaning: they have played a key role in deepening and widening of European integration. None of the member states has left the EC; rather as the time passes, its magnetism does not fail to lure new members into its fold. Already the EC has increased its membership from 6 to 15, and very soon in another decade, its membership may swell up to 20 or 25. Perhaps, the EC signifies a new phenomenon, and this is of selective expanding political process. Its most remarkable salience resides in the fact that Western Europe comprising mature political democracies has been turned into a peace zone: during the preceding half a century, not even once there came about a threat from within the Community to European security. This, in itself, marks out the post-War period as an exemplary period of peace and accelerated economic development so that Europe today constitutes not only a powerful pillar of the economic/technology triad, but also the new global order is being shaped after the Euro-Centric mode.

Yet, our foregoing analysis does not provide an answer to the question embodied in the title of the study. The author himself considers rightly the idea of the "US of Europe" as impractical, "owing to differences in traditions, tastes,

and in integration". He prefers "Europe a la Carte". In the long run, however, he believes, Union's common foreign and security policy could be shaped up, besides a common European currency and national currencies alongside each other. Politically speaking European Confederation rather than the "US of Europe" appears to be the only feasible option. But then how would the author's proposed Confederation be different from de Gaulle's concept of "l'Europe des Patries" could be anybody's guess!

The author, more or less in accord with Alan Sked's proposals, has made a few useful suggestions for reforms, concerning the composition of the Commission, powers of the Council of Ministers, Euro-Parliament, and other institutions. His prime motivation has been to strengthen further the democratic credentials of the EU. But it seems that as the EU undertakes, in due course, the daunting tasks of managing the EMU, common currency, and then of formulating common foreign and security policies, the suggested reforms may turn out to be the take-off points for their further elaboration (in-depth and detail) to suit the practical problems that the EU may be confronted with towards the end of this or beginning of the next century.

Notwithstanding its limitations, this study, accompanied as it is with six appendices relevant to the on-going European integration, should be useful to the students of European Union, for it provides rich fund of relevant information in succinct detail.

EDUCATION NEWS INDEX

**A list of select articles and editorials on education from newspapers received in the
AIU Library during July 1996**

EDUCATIONAL PHILOSOPHY

Kempaiah, K. Integrated education : Need of the hour. *Deccan Herald* 14.7.96.

Shanmugham, N. Adding value to life and studies. *The Hindu* 9.7.96.

EDUCATIONAL PSYCHOLOGY

Ahana. Appreciation : The key for better work culture. *The Hindu* 30.7.96.

Ananthakrishnan, G. To college, without a purpose? *The Hindu* 15.9.96.

DELAYED AND immediate feedback (Editorial). *The Hindu* 30.7.96.

Panwar, S N. High expectations may retard child's progress. *The Hindu* 2.7.96.

Rangwani, Chand B. Learning to let go. *The Times of India* 22.7.96.

EDUCATIONAL SOCIOLOGY

Engineer, Asghar Ali. Muslims and educational backwardness. *The Hindu* 24.7.96.

Nagasaila, D and Suresh, V. Reservation issue. *The Hindu* 28.7.96.

Yasmin Mahmood. Emerging from behind the veil. *The Statesman* 20.7.96.

EDUCATIONAL POLICY & PLANNING

Amrik Singh. New imperatives. *Deccan Herald* 30.6.96.

Hopper, W A F. Minimum levels of learning for children. *The Hindu* 23.7.96.

Jhunjhunwala, Bharat. Education : Not a panacea for the woes of the world. *The Hindustan Times* 9.7.96.

TASK BEFORE NCERT (Editorial). *The Hindu* 2.7.96.

EDUCATIONAL ADMINISTRATION

ACHARYA FOR Visva-Bharati (Editorial). *The Statesman* 15.7.96.

Amrik Singh. Office of the Pro V C. *Deccan Herald* 28.7.96.

Anandakrishnan, M. Education : Yet to pass the test. *The Hindu* 15.7.96.

Atma Ram. Should we dispense with public school. *The Hindu* 2.7.96.

Bhanwer, H S. "Student is the nucleus". *The Tribune* 29.7.96.

Bhaskar, N. Education : A farce? *Deccan Herald* 14.7.96.

CUT UP with cut-offs (Editorial). *The Hindustan Times* 10.7.96.

Dhar, Sujoy. A passe course. *The Telegraph* 22.7.96.

FAKE UNIVERSITIES (Editorial). *The Hindustan Times* 4.7.96.

Jaisingh, Hari. Are we seeking 'committed' VCs? *The Tribune* 28.7.96.

Joshua, Anita. House full on the campus : And how? *The Hindu* 22.7.96.

Koratkar, Aravind V. Deficiencies in affiliated colleges. *The Hindu* 9.7.96.

Leela Mohan Rao, A. Accountability in colleges. *The Hindu* 16.7.96.

Mathew, John and Prakash, Vivek. Lawless law centre. *The Hindustan Times* 31.7.96.

Mukherjee, Mita. The blueprint of change. *The Telegraph* 15.7.96.

NEGLECTED HOMEIO colleges (Editorial). *The Assam Tribune* 15.7.96.

Shenoy, Bhamy V. Time to revolutionise the system. *Deccan Herald* 7.7.96.

Singh, M P. 'Admission to the law faculty is an excuse for many to get a berth in hostels'. *Indian Express* 27.7.96.

CURRICULUM

Dave, Dipti. Caught in a web. *The Telegraph* 8.7.96.

Fanthome, Francis. Updating curriculum. *The Pioneer* 30.7.96.

Mukherjee, Ipsita. The first and foremost among the greens. *The Telegraph* 22.7.96.

Pai, S. Your chance to be good! *Deccan Chronicle* 31.7.96.

Rattan, Vidya. Corrective steps must. *The Tribune* 8.7.96.

Reddi, OS. Restructuring higher education. *Deccan Chronicle* 10.7.96.

Robert Bellarmine, V. Putting Drucker into schoolbags. *The Hindu* 21.7.96.

Sangeeta. Population education. *The Tribune* 22.7.96.

Shiva Prakash, G S. Much ado about vocationalisation. *Deccan Herald* 30.7.96.

Venkob, B R. Whither music education in state? *Deccan Chronicle* 10.7.96.

LANGUAGE & LANGUAGE POLICY

Dayak, Meenaxi. Teaching English : A distinctive challenge. *Deccan Herald* 7.7.96.

Premchandran, T M. Growing importance of English. *The Hindu* 2.7.96.

SCIENCE EDUCATION

Khan, Laigh A. A catalyst of scientific temper. *Deccan Herald* 13.7.96.

Raja Ramanna. 'Is there a science policy at all?' *The Telegraph* 24.7.96.

VOCATIONAL EDUCATION

ALL YOU want to know about architecture (Editorial). *Deccan Chronicle* 17.7.96.

Anand, Navneet. The cutting edge. *Indian Express* 13.7.96.

—————. The law of growth. *Indian Express* 27.7.96.

Chadha, Sushma. More than extracting a tooth. *The Pioneer* 1.7.96.

Chander Prakash. Chasing dreams cost them dear. *The Tribune* 15.7.96.

Dass, Amrita. Computers offer many options. *The Pioneer* 1.7.96.

—————. Fashion & textile design : Appeal and comfort essential. *The Pioneer* 8.7.96.

—————. Photography : Camera offers versatility. *The Pioneer* 29.7.96.

—————. Product & craft designing : A matter of intricacy. *The Pioneer* 22.7.96.

—————. Interior designing : Aesthetics a measure of creativity. *The Pioneer* 15.7.96.

Dinesh Kumar. Hitting a high note. *The Pioneer* 22.7.96.

—————. The craze for computers. *The Pioneer* 30.7.96.

Dua, M R. Of journalists in making. *The Hindustan Times* 31.7.96.

FOR THE green fingered...(Editorial). *The Hindustan Times* 23.7.96.

Gupta, Punam. A crash course in computers doesn't help. *The Times of India* 10.7.96.

Kaul, Prerna. Managing a career. *Indian Express* 20.7.96.

Kumaraswami Pillai, K. Problems of educated unemployment. *The Hindu* 2.7.96.

Mendonca, Allen J. 'Churning out MBAs is bad for business'. *The Times of India* 19.7.96.

Mintzberg, Henry. "We are trying to go beyond the conventional MBA". *The Economic Times* 14.7.96.

Mishra, K L P. The development of R E C institutions. *The Hindu* 30.7.96.

Nair, Raj Gopal. New trends in computer education, the fast changing scenario. *The Hindu* 19.7.96.

Narang, A S. 'Managing the changed world has thrown up new challenges'. *Indian Express* 20.7.96.

OXFORD SUCCUMBS of the MBA bug (Editorial). *The Times of India* 30.7.96.

Pandhi, R K. 'We've set for ourselves high academic standards'. *Indian Express* 13.7.96.

Parthasarathy, Anand. Clues to anxious parents in computer education. *The Hindu* 19.7.96.

Prabhakar, V P. Vocational scheme results disappoint. *The Tribune* 29.7.96.

Prasanna Bhat, V. Feasibility of practical management studies. *The Hindu* 23.7.96.

Rakesh Kumar. Management education in tight corner. *The Pioneer* 29.7.96.

Ramanan, S V. The quest and the reach. *The Hindu* 19.7.96.

Rastogi, Manju. Giving freshers the right start. *The Times of India* 10.7.96.

Sriram, R. Quality in computer training. *The Hindu* 19.7.96.

Thomas, Sunny. Boomtime for software professionals. *The Times of India* 10.7.96.

Wasan, Tarun. Learning about cheques and balances. *The Times of India* 17.7.96.

TEACHERS & TEACHING

Anand, Vandana Datt. Disdained and disregarded... *The Hindustan Times* 23.7.96.

Anthikad-Chhibber, Mini. While managements make money, teachers have a turbulent time. *Deccan Chronicle* 7.7.96.

Batra, Sunil. What a teacher should be? *The Hindustan Times* 9.7.96.

Dayak, Meenaxi. Teaching English to English teachers. *Deccan Herald* 20.7.96.

Dhawan, P S. The demise of 'guru'. *The Tribune* 15.7.96.

Gangadhar, M. Role of a nursery school teacher. *The Hindu* 16.7.96.

Ghosh, Barun. Class struggle. *The Telegraph* 19.7.96.

Gupta, Punam. Coaching schools : An asset or a racket? *The Times of India* 17.7.96.

Ilango, M S. An accepted teacher. *The Hindu* 16.7.96.

Joshua, Alexander. The woes of private school teachers. *The Hindu* 30.7.96.

Kulkarni, Nita Jatar. Teacher should be employed on the basis of contract : For life or till next term? *The Telegraph* 29.7.96.

Maitra-Sinha, Anjana. An analysis on the role of the teacher. *The Hindu* 9.7.96.

Majumdar, Samir. Sister shows the way. *The Hindustan Times* 23.7.96.

Mohammad Erfan, C. What goes into teaching English. *The Hindu* 23.7.96.

Nair, Uma. Lessons for teachers. *The Hindustan Times* 6.7.96.

NATIONAL IMPERATIVES (Editorial). *Deccan Herald* 21.7.96.

Raha, Sutapa. Education on the racks. *The Statesman* 20.7.96.

Sachdeva, M L and Vats, Arunima. Teachers' selection : Observational study. *The Tribune* 22.7.96.

Sahidullah, Fatima Johsin. A noble calling. *The Assam Tribune* 7.7.96.

Sreedhara, V S. Full-time woes of part-timers. *Deccan Herald* 27.7.96.

Venkatesh, B. On private tuitions. *Deccan Herald* 28.7.96.

COUNSELLING & GUIDANCE

Anand, Navneet. After graduation, what? *Indian Express* 6.7.96.

—————. Charting a new course. *Indian Express* 6.7.96.

Mohan, Amitabh. Decision-making : Finding the right career. *The Pioneer* 29.7.96.

Ramachandran, K. Looking into the future. *The Hindu* 22.7.96.

Sharma, Saurabh. Going beyond graduation. *The Hindustan Times* 17.7.96.

EDUCATIONAL RESEARCH

Sreenivasan, Binod. Engineers and indigenous research and development. *The Hindu* 23.7.96.

Valluri, S T. Clarification on thesis authorship. *The Hindu* 9.7.96.

EDUCATIONAL TECHNOLOGY

CHALLENGES FACING internet industry (Editorial). *The Hindu* 19.7.96

Krishnaswamy, S. Information technology. *The Hindu* 30.7.96.

Sahaney, Ranne. Publishing on CD-ROMs. *The Pioneer* 6.7.96.

Sehgal, Punam. Computers for children. *The Tribune* 27.7.96.

EDUCATIONAL EVALUATION

Akhilshwari, R. Andhra Pradesh : Students stumped by leaks. *Deccan Herald* 4.7.96.

Awasthi, Jitender. Attempt at reforms. *The Tribune* 8.7.96.

Chawla, Manju. Iron curtain raises doubts. *The Tribune* 15.7.96.

Shankar, T L. Foolproofing Eamcet from foul play. *Deccan Chronicle* 30.7.96.

ECONOMICS OF EDUCATION

Kurian, K K. Commercialisation of schooling in Kerala. *The Hindu* 17.7.96

Patro, Bijoy Basant. Budgeting education. *The Pioneer* 30.7.96.

Roy, Ash Narain. Winds of change. *The Hindustan Times* 6.7.96.

Shanker, Vijay. Privatising varsity education. *The Pioneer* 15.7.96.

UNEMPLOYED ENGINEERS. (Editorial) *The Assam Tribune* 29.7.96.

WORKING ON tomorrow (Editorial). *Deccan Herald* 16.7.96.

WORKING ON tomorrow (Editorial). *Deccan Herald* 17.7.96.

LIBRARIES & BOOKS

Bali, Yogendra. booklovers, paradise. *The Hindustan Times* 24.7.96.

Bhal, Taru. Enticing them to world of book. *The Tribune* 15.7.96.

Das, Utpal. Why library legislation in Assam. *The Assam Tribune* 5.7.96.

Dutta, Swapna. Clip, clip, clip, and slip it in a book. *The Pioneer* 14.7.96.

Mohanraj, V M. Importance of libraries. *Deccan Herald* 21.7.96.

Razzak, M A. Hush! this library is different : British Library, Hyderabad. *Deccan Chronicle* 31.7.96.

Salian, Neesha. From books to beyond. *The Times of India* 14.7.96.

Singh, Radhika. Intellectual property worth patenting. *The Economics Times* 24.7.96.

Thomas, Sunny. Surround yourself with books. *The Times of India* 23.7.96.

Walia, Shelley. The Bodleian and Oxford culture. *The Hindu* 21.7.96.

STUDENTS & STUDENT ACTIVITIES

ERADICATE RAGGING (Editorial). *The Assam Tribune* 25.7.96.

Goel, Poonam. Is ragging an issue? *The Hindustan Times* 17.7.96.

Malhotra, Preeti. Seniors on the prowl. *The Hindustan Times* 17.7.96.

SPECIAL EDUCATION

Ahuja, Anupam. Visible handicaps in the act for the disabled. *The Hindu* 16.7.96.

Khosla, Mehreen. Teacher, do you see me? *Indian Express* 6.7.96.

WOMEN'S STUDIES

Chatterji, Shoma A. The sexist bias in maths and science. *Free Press Journal* 30.7.96.

Dhanoo, H S. Girl dropout rate alarming. *The Tribune* 1.7.96.

ADULT EDUCATION

Khullar, K K. Lending a helping hand. *The Pioneer* 8.7.96.

Nithya, S. Adult education : Its role and concept. *The Hindu* 16.7.96.

Sharga, B N. A pioneer of literacy. *The Pioneer* 5.7.96.

Sharma, Anuradha. Neo-literates exhibit afresh approach *The Tribune* 1.7.96.

ELEMENTARY & SECONDARY EDUCATION

Aggarwal, Y P. Where children do research. *The Tribune* 22.7.96.

Anand, Rita. Sorry state of schools. *The Pioneer* 30.7.96.

Sivaprasad, S. Intermediate studies at crossroads? *The Hindu* 23.7.96.

Varghese, Ashwathi. Truma of tender years. *The Hindu* 29.7.96.

COMPARATIVE EDUCATION & AREA STUDIES

Krishnappa, S S. Dakshina Kannada, the capital of education. *Deccan Herald* 2.7.96.

Madhav, K V S and Anantha Krishnan, M. Destination United States. *Deccan Chronicle* 28.7.96.

Scott-Clark, Cathy. In England, students with 0% & can still get a degree. *Deccan Chronicle* 14.7.96.

INTERNATIONAL COOPERATION

Maheshwari, Belu. Time to tighten our seatbelts. *The Tribune* 8.7.96.

INSTITUTIONAL PROFILE

Nadarajan, S. Medical school par excellence : Jawaharlal Institute of Post Graduate Medical Education and Research, Pondicherry. *The Hindu* 29.7.96.

Jagtap, Namratha. Fifty golden years of St Philomena College, Mysore. *Deccan Herald* 27.7.96.

Rastogi, Manju. Learn from the past and get paid for it : National Archive of India. *The Times of India* 24.7.96.

Regunathan, Sudhamahi. Preserving biodiversity : G B Pant Institute of Himalyan Environment and Development, Almora. *The Hindustan Times* 27.7.96.

Sengupta, Caesar and Sarin, Prashant. Citadel for economists : Delhi School of Economics. *The Hindustan Times* 10.7.96.

Varli, Anna. Lending the regal touch : Queen Mary's College, Madras. *The Hindu* 14.7.96.

BIOGRAPHICAL PROFILE

DR P N Chhuttani (Editorial). *The Tribune* 20.7.96.

Gupta, Neena. Deepak Lal : A gentleman and once an officer. *The Pioneer* 30.7.96.

Khalid, M. Habib-ur-Rehman : A cradle of media men. *The Tribune* 21.7.96.

Parthasarathy, R. Simon Poisson : Who furthered use of mathematics in physics. *The Hindu* 4.7.96.

THOMAS KUHN : Philosopher of science (Editorial). *The Times of India* 16.7.96.

WANTED PRINCIPALS

With the following qualifications and experience are needed for the below mentioned Educational Institutions of the **ANJUMAN HAMI-E-MUSLIMEEN, BHATKAL.**

1. ANJUMAN ENGINEERING COLLEGE, FOR MEN :

Essential :

1. Master's Degree in Civil / Electrical / Mechanical / Electronics / Computer Engineering from a recognised University with minimum 15 years of experience in Teaching / Industry and Research, inclusive of minimum eight years experience in Teaching / Research in Engineering College / Institution of Technology.
2. Not less than 5 years experience as a Professor in Technology Institutions of University standard
3. Specialised knowledge in one or more fields in Technology with experience in guiding Research.
4. 5 Years' administrative experience

2. ANJUMAN ARTS, SCIENCE & COMMERCE COLLEGE :-

Essential :

1. Master's Degree in Arts, Science or Commerce with minimum 15 years of experience in Teaching / Industry and Research inclusive of minimum of eight years experience in Teaching / Research in College / Institutions of Science.
2. Not less than 10 years experience as a Lecturer.
3. 5 years administrative experience.

3. ANJUMAN COLLEGE OF WOMEN :-

Essential :

1. Master's Degree in Arts or Science with minimum 15 years of experience in Teaching/Industry and Research inclusive of minimum of eight years experience in Teaching/Research in College/institutions of Science.
2. Not less than 10 years experience as a Lecturer
3. 5 years administrative experience

Desirable in all cases :

1. Doctorate degree
2. Professional / Scientific / Research work of outstanding merits
3. Experience in planning and Development of Educational / Technical institutions at Degree / Post-Graduate degree level

Salary will be commensurate with qualification and experience. Initial appointment will be on probation for one year. Candidates who are not below 45 years of age may apply to the General Secretary, Anjuman Hami-e-Muslimeen, Bhatkal (Pin : 581 320) within 21 days from the date of publication of this advertisement, together with copies of certificates and testimonials. Lecturers already in service of Anjuman Hami-e-Muslimeen, Bhatkal may also apply

(ABDULLA DAMUDI)
SECRETARY.

CLASSIFIED ADVERTISEMENTS

FRANABANANDA WOMEN'S COLLEGE LHUMITHI COLONY DIMAPUR-797112 : NAGALAND

Wanted Lecturers in Education with 55% marks. The post is open and retired persons may also apply. Apply on plain paper within 15 days from the date of publication of this notification. Initial pay per month Rs. 3075.00 in the pay scale of Rs. 2200-75-4000.

The college is affiliated to Nagaland University and sponsored by Bharat Sevashram Sangha.

Manik Bhattacharjee
SECRETARY

Phone : 22140/26194

MAR ATHANASIUS COLLEGE ASSOCIATION, KOTHAMANGALAM (686 666) KERALA CORRIGENDUM

This is to announce that the last date in the advertisement for the appointment of Lecturers in Computer Science & Engineering in the Mar Athanasius College of Engineering, Kothamangalam dated 27-5-1996, for the receipt of filled applications to the Office of the Secretary, M.A. College Association, Kothamangalam is extended for one month from the date of publication of this advertisement.

Kothamangalam
5-8-1996.

SECRETARY

UNION CHRISTIAN COLLEGE, ALWAYE - 683 102 WANTED

1) Lecturer in Malayalam - Open/Community (Jacobite/Orthodox/Mar-thoma/CSI) Quota.

2) Lecturer in Hindi - Open Quota (Leave vacancy) (Those who have applied during last advertisement need not apply).

Age : As per Kerala Government rules

Qualifications: (a) As per UGC norms

(b) M.A. with 50% marks in the concerned subject and B.Ed.

3) Last Grade Staff (Sweeper) - Leave vacancy.

Age & Qualification : As per Kerala Government rules.

Prescribed application forms can be had from the College Management Office on payment of Rs. 100/- for Lecturer post and Rs. 25/- for last Grade Staff. Apply within 30 days of this advertisement.

Alwaye-2,
13.8.96

MANAGER

UNIVERSITY OF MADRAS

Applications are invited from the eligible candidates belonging to the communities as mentioned in the notification against each post for the position of Librarian; Deputy Librarian; and Assistant Librarian for the various campuses and Departments of this University.

Qualifications for the post of Librarian and Deputy Librarian:-

- i) Master's Degree in Library Science/Information Science/Documentation with atleast fifty five percent marks or its equivalent grade and a consistently good academic record;
- ii) One year specialisation in an area of information technology/Archives and Manuscript keeping or Master's degree in an area of thrust in the institution;
- iii) Evidence of innovative library service and organisation of published work and professional commitment.

Experience for Librarian: Atleast ten years as a Deputy Librarian in a University Library or fifteen years experience as a College Librarian;

Experience for Deputy Librarian: Eight years experience as an Assistant University Librarian/College Librarian.

Desirable for both the posts: M.Phil/Ph.D. degree in Library Science/Information Science/Documentation/Archives and Manuscript keeping.

For the post of Assistant Librarian:

- i) Qualifying the National Level Test conducted for the purpose by the UGC or any other agency approved by the UGC;
- ii) Master's degree in Library Science/Information Science/Documentation or

an equivalent professional degree with atleast fifty five percent marks or its equivalent grade plus a consistently good academic record;

(OR)

Master's degree in Arts/Science/Commerce or equivalent degree with atleast fifty five percent marks or its equivalent grade with Bachelor's degree in Library Science/Information Science/Documentation or an equivalent professional degree with atleast fifty five percent marks or its equivalent grade plus a consistently good academic record;

Scale of pay:

Librarian : Rs. 4500-150-

5700-200-7300

Deputy Librarian : Rs. 3700-

125-4950-150-5700

Assistant Librarian :

Rs. 2200-75-2800-100-4000

Plus allowances admissible to the scale.

Number of posts and Community for which the post is reserved as per the Communal Roster

Librarian (University Main Library) : 1 (OC)

Deputy Librarian : 1 (SC)

Assistant Librarian : 10 (OC-3; BC-3; MBC-2; SC-2)

Candidates may apply to the Registrar of the University (by designation only) for specimen application form and other details with a D.D. for Rs. 100/- towards the fee, drawn in favour of the Registrar, University of Madras, Madras-5 payable along with a self addressed envelope (size 25 cms x 12 cms) stamped to the value of Rs. 5/- SC/ST candidates have to pay a sum of Rs. 50/- only on production of Community Certificate.

श्री अमन सिंह आत्रेय पुरस्कार योजना १९९६

सम्पूर्ण भारतवर्ष के समस्त विश्वविद्यालयों द्वारा पी-एच.डी. उपाधि के स्वीकृत हिन्दी शोध प्रबन्ध, पुरस्कार के लिये आमन्त्रित हैं। केवल प्रकाशित शोध ग्रन्थ ही स्वीकार होंगे।

अनिवार्यताएं :

१. प्रकाशित शोध ग्रन्थ की चार प्रतियां भेजें। कृपया पहले विज्ञापन में भी संशोधन कर लें। शेष पूर्वतः।
२. प्रकाशन अवधि १९९४ से १९९६ तक।
३. प्रकाशक का प्रकाशन तिथि सम्बन्धी प्रमाण पत्र।
४. संशोधन के कारण अन्तिम तिथि १५ अक्टूबर १९९६ कर दी गई है।
५. पुरस्कार राशि केवल दस हजार एक रु. मात्र (रु० १०,००१)
६. निर्णायक मण्डल का निर्णय अन्तिम व मान्य होगा।
७. पुरस्कार वितरण आयोजन ५ जनवरी १९९७ को होगा।

डॉ. कमला आत्रेय, अध्यक्ष,
श्री अमन सिंह आत्रेय हिन्दी विकास संस्थान,
६१-ए, सार्वक, मेरठ-२५०००२.

Application form and other details can be had from the University on or before 10-9-1996. The last date for submission of filled up application is 20-9-1996.

- N.B.: 1) The Syndicate reserves the right to fill or not to fill any of the posts.
 2) Wherever a post has been reserved for a particular community eligible candidates of that community alone need apply.
 3) The Syndicate also reserves the right to post the candidates selected for the posts in any of the campus Libraries of the University.
 4) Applications from candidates who are above 50 years of age shall not be considered.
 5) Applications should be made only in the form prescribed by the University. The applications received after the last date will be summarily rejected.
 6) Applicants who had previously applied to any post in response to the earlier advertisement in the University should apply again for the post now advertised.

REGISTRAR

SEVANTIL KANTILAL SCHOOL
OF BUSINESS MANAGEMENT
NORTH GUJARAT
UNIVERSITY,
PATAN
M.B.A. PROGRAMME

ADMISSION NOTICE 1996-98

Applications are invited for admission to 60 Seats of Two Year full time M.B.A. Programme approved by AICTE, New Delhi. Graduates with 50% or above marks in aggregate are eligible to apply. Application form and prospectus can be obtained from the Registrar, North Gujarat University, University Road, Patan - 384265 on payment of Rs. 250/- either in cash or by crossed Demand Draft, drawn in favour of Registrar, North Gujarat University, Patan alongwith self addressed (with Five Rupees stamp) envelope of 30x20 Cms. size. Last date for receiving applications is September 6, 1996.

Patan B.N. Shah
12.8.96 REGISTRAR

PT. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR SCHOOL OF STUDIES IN STATISTICS ADVERTISEMENT

Applications are invited for one Junior Research Fellow (JRF) (₹ Rs. 2500/= + HRA + MA) and one Technical Assistant (T.A.) (₹ 1500/= + HRA + MA) for three years in a D.S.T. sponsored project entitled "CONFIGURATIONAL ANALYSIS OF INTEGRATED AND MINI STEEL PLANT OPERATIONS" under the supervision of Dr. S.K. Singh.

Applicants should have consistently

good academic record with first class M.A./M.Sc. degree in Statistics. NET/GATE qualified candidates will be given preference. Appointed fellows will be allowed to work towards Ph.D.

Application on plain paper giving full Bio-Data along with attested copies of marks sheets, certificates and other neces-

sary documents should reach Dr. S.K. Singh, Reader, S.O.S. in Statistics, Pt. R.S. Shukla University, Raipur (M.P.) - 492010 on or before twenty one days after the advertisement. Suitable T.A. will be paid to the candidates called for interview.

Dr. S.K. Singh
Principal Investigator



TATA INSTITUTE OF SOCIAL SCIENCES

(A Deemed University)

Post Box No. 8013, Deonar, Mumbai - 400028

Admission Announcement for 1996-97

1. Certificate in Research Methodology (one semester full-time)
2. M.Phil in Social Work/Social Sciences (Full-time and part-time)
3. Ph.D. in Social Work/Social Sciences (Full-time and Part-time)

ELIGIBILITY AND COST OF APPLICATION FORM

1. Certificate in Research Methodology: Master's Degree in Social Sciences/Social Work with at least 50% (45% for SC/ST) of the marks or grade point average of 3.0 (2.50 for SC/ST) under the University Grants Commission 7 point grade system. Application Form costs Rs. 20/-

2 & 3 : M. Phil/Ph. D. Programme : Master's Degree of the relevant faculty with 55% of the marks or grade point average of 3.5 under the University Grants Commission 7 point grade system. Application Form costs Rs. 50/-

For Brochure and Application form : Write to the Asst. Registrar (Acad) along with a self addressed envelope with a postal stamp worth Rs. 6/- affixed thereon. The demand draft for cost of Application Form and brochure should be drawn in favour of TATA INSTITUTE OF SOCIAL SCIENCES, preferably, payable at the State Bank of India, Deonar Branch or Central Bank of India, Deonar Branch, Mumbai.

For further details, Please write to Asst. Registrar (Acad), along with a self addressed envelope with the postal stamp worth of Rs. 2/-.

Place: Mumbai
Date: 26.8.96

Dr. S.K. Bandyopadhyay
REGISTRAR

Concept

Book From
Indian Meteorological Society

ADVANCES IN TROPICAL METEOROLOGY

Meteorology and National Development

Edited by

Rattan K. Datta

Foreword by

N. SEN. ROY

President, Indian Meteorological Society

Hardbound

Rs. 950

The publication is based on the proceedings of the National Symposium on Meteorology and National Development organised at New Delhi by the Indian Meteorological Society in 1993. The symposium covered a wide range of subjects including Aviation Meteorology, Hydrology, Satellite Meteorology and Agricultural Meteorology etc.

Published by :

Ph.: 5504042, 5554042

CONCEPT PUBLISHING COMPANY

A/15-16, Commercial Block, Mohan Garden,

NEW DELHI - 110059 (INDIA)

Cable : CONPUBCO Fax : (011) 5598898

AIU PUBLICATIONS

HANDBOOKS AND DIRECTORIES		Rs.				
1.	Universities Handbook - 26th Edition - 1995	1200.00		56.	Natural & Applied Sciences - 1985-86	320.00
2.	Handbook of Distance Education - 1996	60.00		57.	Social Sciences & Humanities - 1986-87	245.00
3.	Handbook of Engineering Education - 1996	100.00		58.	Natural & Applied Sciences - 1986-87	325.00
4.	Handbook of Management Education - 1995	100.00		59.	Social Sciences & Humanities - 1987-88	340.00
5.	Handbook of Medical Education - 1994	80.00		60.	Natural & Applied Sciences - 1987-88	550.00
6.	Handbook of Rules & Regulations for Inter-University Tournaments 1994	120.00		61.	Social Sciences & Humanities - 1989	360.00
7.	Directory of Distance Education Institutions - Part I : India - 1991	Out of print		62.	Natural & Applied Sciences - 1989	400.00
	Part II : Pakistan & Sri Lanka 1992	500.00		63.	Social Sciences & Humanities - 1990	400.00
8.	Directory of Women's Studies in India 1991	120.00		64.	Natural & Applied Sciences - 1990	500.00
9.	Equivalence of Foreign Degrees 1987 Amendments upto September 1995	180.00		65.	Social Sciences & Humanities - 1991	550.00
10.	Association of Indian Universities - 1925-85 (1985)	100.00		66.	Natural & Applied Sciences - 1991	750.00
BOOKS AND PROCEEDINGS				67.	Social Sciences & Humanities - 1992	1000.00
11.	Staff Development in Indian Universities - 1996	250.00		68.	Natural & Applied Sciences - 1992	1000.00
12.	Higher Education in India - In Search of Quality - 1995			CONTRIBUTIONS TO EXAMINATION REFORMS		
	Paper Back	400.00		69.	Unfair Means in University Examinations - A Study 1989	50.00
	Deluxe Edition	500.00		70.	Monograph on Sample Free Item Analysis 1987	50.00
13.	Policies of Higher Education - 1995	200.00		71.	Scaling Techniques : What, Why & How 1986	75.00
14.	Liaison Cells for University Industry Interaction - 1995	150.00		72.	Computer in Examinations (Why & How) 1982 (reprint 1988)	65.00
15.	Accountability in Higher Education - 1995	200.00		73.	Monograph on Grading 1977 (reprint 1991)	15.00
16.	University Administration and Management - 1995	200.00		74.	Monograph on Practical Examinations 1979 (reprint 1991)	30.00
17.	Environmental Challenges and The Universities - 1994	150.00		75.	Monograph on Moderation of Examination Results 1981 (reprint 1986)	8.00
18.	Excellence Achieving Social Relevance in Higher Education - 1993	150.00		76.	Monograph on Test & Item Analysis 1977 (reprint 1985)	17.00
19.	Decentralisation of Higher Education System 1992	100.00		77.	Monograph on Question Banking in English Language & Literature 1978 (reprint 1985)	10.00
20.	Higher Education in India : Retrospect and Prospect - 1991	250.00		78.	Monograph on Semester System 1979 (reprint 1984)	20.00
21.	Studies in Distance Education - 1988	20.00		79.	Monograph on Internal Assessment 1977 (reprint 1984)	10.00
22.	Universities and Research - 1982	40.00		80.	Monograph on Syllabus Analysis and Restructuring 1982 (reprint 1984)	10.00
REPORTS				81.	Research Abstracts - Part I, II & III 1978 (reprint 1989)	Each 6.00
23.	Graduate Unemployment in India - 1991	150.00		82.	Research Abstracts - Part IV 1981 (reprint 1986)	14.00
24.	Report of the Task Force on Autonomous Colleges and Departments - 1988	60.00		QUESTION BANK BOOK SERIES		
25.	Elite in the Making - 1987	40.00		Undergraduate Level (English Script)		
26.	Educational Statistics at a Glance - 1987	75.00		83.	Chemistry 1994	150.00
27.	Physical Fitness & Sports Standards in Universities - 1987	50.00		84.	Physics 1977 (reprint 1995)	130.00
28.	State Funding of Universities - 1986	50.00		85.	Zoology 1978 (reprint 1993)	100.00
29.	University Finance - A Statistical Profile - 1983	75.00		86.	Botany 1977 (reprint 1993)	100.00
30.	Economics of College Education - A Study of Hindu College, Delhi - 1982	25.00		87.	Plant Pathology 1994	100.00
31.	Internal Management in Universities - 1980 (reprint 1986)	30.00		88.	Soil Science 1992	130.00
32.	Preparations made by Universities to Receive 10 + 2 Input 1979 (reprint 1982)	30.00		89.	Agronomy 1991	100.00
BIBLIOGRAPHY OF DOCTORAL DISSERTATIONS				90.	Anatomy 1983	60.00
33.	Social Sciences	50.00		91.	Physiology 1979 (reprint 1987)	45.00
34.	Humanities 1857-1970	100.00		92.	Educational Psychology 1995	100.00
35.	Physical Sciences	125.00		93.	Political Science 1994	70.00
36.	Biological Sciences	100.00		94.	Geography 1992	60.00
37.	Physical Sciences - 1970-75	120.00		95.	History 1977 (reprint 1995)	80.00
38.	Biological Sciences - 1970-75	120.00		96.	Sociology 1978 (reprint 1993)	100.00
39.	Social Sciences & Humanities - 1975-76	50.00		97.	Banking & Accountancy 1994	70.00
40.	Natural & Applied Sciences - 1975-76	90.00		98.	Economics 1977 (reprint 1991)	100.00
41.	Natural & Applied Sciences - 1976-77	120.00		99.	Constitutional Law 1985	35.00
42.	Natural & Applied Sciences - 1977-78	100.00		100.	Law of Contracts 1981 (reprint 1989)	45.00
43.	Natural & Applied Sciences - 1978-79	125.00		101.	Electrical Power System 1987	75.00
44.	Natural & Applied Sciences - 1979-80	130.00		Hindi Script		
45.	Social Sciences & Humanities - 1980-81	120.00		102.	Zoology 1988	100.00
46.	Natural & Applied Sciences - 1980-81	180.00		103.	Chemistry 1988	160.00
47.	Social Sciences & Humanities - 1981-82	150.00		104.	History 1990 (reprint 1995)	100.00
48.	Natural & Applied Sciences - 1981-82	225.00		(OUT OF PRINT)		
49.	Social Sciences & Humanities - 1982-83	160.00		Undergraduate Level		
50.	Natural & Applied Sciences - 1982-83	250.00		105.	Mathematics	
51.	Social Sciences & Humanities - 1983-84	180.00		106.	Psychology	
52.	Natural & Applied Sciences - 1983-84	320.00		107.	Commerce	
53.	Social Sciences & Humanities - 1984-85	200.00		108.	Foods & Nutrition	
54.	Natural & Applied Sciences - 1984-85	320.00		109.	English Language & Literature	
55.	Social Sciences & Humanities - 1985-86	200.00		110.	Pharmacology	
				111.	Automobile Engineering	
				Postgraduate Level		
				112.	Mathematics	

Address Enquiries to :

Deputy Secretary (Publications)

Association of Indian Universities

AIU House, 16 Kotla Marg, New Delhi - 110 002

Telephones : 3230059, 3232429, 3233390, 3232305

Telex : 31-66180 AIU IN

GRAM : ASINDU

Fax : 011-3236105

GOVERNMENT OF INDIA FELLOWSHIP SCHEME FOR DOCTORAL WORK IN CRIMINOLOGY AND POLICE SCIENCE

Ministry of Home Affairs, Government of India has agreed to enhance the Scholarship amount of Doctoral Fellowship Scheme for Criminology and Police Science as per UGC Scheme. Fresh applications are therefore, invited from Indian Nationals for the award of six Fellowships for Doctoral work in Criminology and Police Science. The value of each fellowship will be Rs. 2,500/- per month for the first two years and Rs. 2,800/- in the third year plus a contingency grant of Rs. 5,000/- per annum. The Fellowships are tenable for three years. Departmental assistance of Rs. 3,000/- per year will be paid to the Institution in which the fellow is registered for the Ph.D.

2. Qualification: Ist/2nd Class Master's degree in (not less than 55% marks or equivalent grade) in criminology or sociology or social work or psychology or social anthropology or public administration or political science or law with IInd Class Bachelor's degree in aforesaid subject. The candidate should be passed NET for Junior Research Fellowships. The candidate should be registered for Ph.D programme with any recognised University in India or should get registered within three months of the award of fellowship.

3. Age : Preferably below the age of 30 years.

4. Rules : Copies of the rules of Fellowship Scheme and prescribed application form can be obtained on request from Director (Research), Bureau of Police Research & Development, Ministry of Home Affairs, Government of India, Block No. 11, 4th floor, CGO Complex, Lodhi Road, New Delhi-110003.

5. Due Date : Application (in the prescribed form) should be sent to the Director General, Bureau of Police Research & Development, MHA/Govt. of India, Block No. 11, 4th floor, CGO Complex, Lodhi Road, New Delhi-110003, superscribing the cover "APPLICATION FOR DOCTORAL WORK IN CRIMINOLOGY & POLICE SCIENCE" so as to reach on or before 24th Oct. 1996. If a candidate is already working in a University or a Government Institution, he/she should apply through the Head of the Institution in which he/she is working.

6. Selection would be restricted to only those candidates who have passed National Eligibility Test for Junior Research Fellowships conducted by University Grants Commission.



NABAKRUSHNA CHOUDHURY CENTRE FOR DEVELOPMENT STUDIES,

BHUBANESWAR-751 013, ORISSA 17158

Applications are invited for the following posts in the UGC Scale of Pay to reach the Centre on or before September 30th, 1996.

Director, Professor of Economics (Two), Reader in Economics (One), Reader in Social Anthropology (One), Lecturer in Industrial Economics (One), Research Associate in Sociology, Economics and Social Anthropology (one each).

Additional posts of Professor may also be considered on availability of funds. Applications will also be considered for the Visiting Fellows in Economics and Social Anthropology on contract basis.

Prescribed application forms and information regarding prescribed minimum qualification and other particulars can be obtained from the Secretary of the Centre by sending an account payee Demand Draft of Rs. 50/- drawn on State Bank of India, Bhubaneswar and payable to NABAKRUSHNA CHOUDHURY CENTRE FOR DEVELOPMENT STUDIES together with a self addressed envelope bearing stamp of Rs. 3/-.

**B.Misra
DIRECTOR**

